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EXPRESS
SUMMER
GIVE-
AWAY
Page 45

NEW COMPUTER EXPRESS

BRITAIN'S BIGGEST SELLING COMPUTER WEEKLY

AMIGA

- New bundle unveiled
- Music-X upgrade
- AMOS update

ST

- TCB Tracker MIDI
- Dragonflight delights
- 110Mb hard drive

PC

- Microsoft's 'DOS 5'
- Power Pak power
- Buying a used PC?

ARCHIMEDES

- Desktop Office
- Problems with Paint?

CPC

- Battle of the Bulge

Specialist columns for:
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SPECTRUM•SAM•PD

BARGAINS!
28 value-packed pages in
SHOPPING EXPRESS

DUSSELDORF '90 – ATARI DELIVERS

A new TOS & Desktop, a new TT, a new laser and a colour Calamus too...

ALL THE FUN OF THE FAIR - PAGE 2

THE ULTIMATE AMIGA UPGRADE

Now that a new £399 add-on is all set to give your A500 more power than an Amiga 3000, Express asks:

WHAT DOES THE 3000 HAVE LEFT TO OFFER?

FULL REPORT PAGES 3, 51 & 52

GAMES GALORE – IT'S CES SHOWTIME FOLKS!

PAGES 46 &47

...and we'll be there too! EXPRESS's comprehensive guide to the best of the 75 exhibitors at Olympia's new leisure show.

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FAR-OUT FAIRWAY FORE PLAY!

PAGE 54

Does Jack Nicklaus's new golf game make the cut?

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Plenty on show at German ST and TT exhibition

ATARI THRIVING AT CONTINENTAL SHOW

Boasting 200 exhibitors, Dusseldorf's Atari-Fair '90 acted as showcase to the new ST-compatible 32MHz TT – the low cost workstation offered at only the kind of price it seems Atari can manage.

By Andy Storer in Dusseldorf

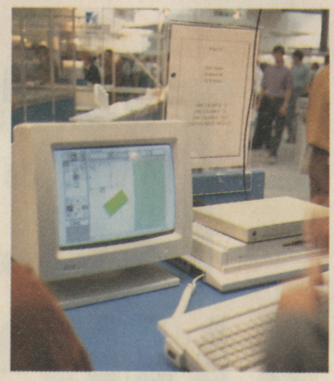
For £2,300 or so you can buy the entry-level 68030 4Mb TT which one day, the company hopes, will mature from the ultimate ST upgrade to something approaching a *de facto* standard. Although not yet supporting its planned Unix version 5.4 operating system, the TT was shown running Non Standard Logic's exciting NeXT-style front-end Wish2 – a 'X-Window Iconic Unix Shell' – which will be bundled with the 8Mb Unix TTs next spring.

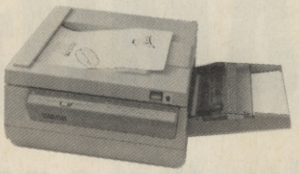
NEW TOS

Perhaps of more immediate interest to ST owners were the new versions of TOS and Desktop running on the TT. Although TOS version 3.01 is designed to run on 030 machines only, Atari plans to migrate it down to other STs at soon as possible. Described by Atari's vice president of technical development, Leonard Tramiel, as "a major development in the functionality of graphic interfaces", Version 3 and its accompanying Desktop set out to address a range of design enhancements arising from the GEM interface developed by Digital Research five years ago.

Menu options are now accompanied by keystroke macros, all icons are user definable in two colours, files and folders can be left on the desktop and most significantly of all, a shell or 'file mask' is now included which allows multiple file selection across a range of folders.

Atari also took the opportunity to launch a brand new budget-priced laser – the SLM605 – a compact, 300 dots per inch, six pages per minute printer expected to be on sale here for around £800.





• Top: Colour capabilities make Calamus powerful for the price. Bottom: Atari's new SLM605 laser printer.

Looking virtually the same as the current SLM 804, the 41 x 39 x 21cm laser should be out by Christmas, but judging by the appearance on another stand of *Calamus SL*, it would seem Atari may have a market for a colour laser too.

COLOUR CALAMUS

The new *Calamus* handles full colour images in a variety of graphics formats and four colour separations suitable for professional DTP output are possible. Priced at £400-£500, the package may sound expensive but since colour separation is only just coming to the DTP machine par excellence – the Mac – and is otherwise available only at a price well into four figures, *Calamus SL*, available here in December (from distributor Signa on 0252 341600) would appear to be a real bargain.

Indeed, the new *Calamus* was indicative of the way the ST is viewed in Germany as a professional platform. Of the 200 exhibitors, less than half a dozen were games-oriented.

SERIOUS STUFF

Stand after stand displayed graphics boards, accelerator cards, DTP packages and sophisticated MIDI set-ups.

For instance, The Maxon board, from Macsoft on 01049 61196 481811, can boost the power of a standard ST by 360 per cent with its on-board 68020 chip, while the £900 Samplayer from KWS on 01049 221 327096 is a 12-bit sampler offering stereo input/output at rates of up to 44kHz with a 30-track sample sequencer built in.

Retouche Professional from 3K Computer Blld, but handled in this country by Copycare on 081-679 7307, also raised a few eyebrows. It's a 256-greyscale desktop reprographics package offering photo-realistic retouching and halftone imaging. What's more it can read in Mac, PC and Amiga image formats – all for around £150.

Top of the range though was easily CSS's Gigafile – a Sony badged 650Mb rewriteable optical disk using 5.25-inch disks that's yours for £4,000.

With access times at less than 90ms, the Gigafile can be addressed as just another hard drive but with disks costing £280 each you'll be pleased to know you'll probably only ever need to buy one. ■

Portfolio equals portability

Atari's premier palmtop also made an equally impressive appearance. Now billed as a mobile office, the Portfolio was surrounded by new peripherals extending its usefulness as a lightweight laptop.

On the software side, the company showed seven new titles – among them *Car Office*, a journey logger ideal for someone on the move; *Profit*, a tax calculation suite; *Time Manager*, an appointments and scheduling package and *BTX/VTX Manager*, a videotext communication emulator. Hardware-wise, Atari will have been pleased to see several third parties beginning to deliver card drives (right) and PC connectivity for the machine. Indeed, one German firm showed off a unit for the Portfolio which housed a 3.5-inch disk drive, extra RAM, serial and parallel ports and was claimed to run any PC application. ■

Oo-Err Missus

While *Express* doesn't necessarily go overboard on all this New Age 'brain machine' guff, the surprise of the show was undoubtedly MindMachine's ST-based Megabrain.

Costing a mere £400, the unit, replete with LED 'eyephones', purports to synchronise the left and right hemispheres of the brain and thereby induce 'whole brain learning' capabilities.

Would-be ST-owning New Age Voyagers should contact the company on 01049 22 33 72625 for more details on how to, as they put it, 'enjoy satisfaction beyond the normal threshold of human intercourse'. ■

Commodore
SCREEN GEMS
AMIGA
500

• *Screen Gems: CBM's big Xmas bundle.*

Amiga Screen Gems hits the streets

Amiga buyers are being offered a special package for this winter described by Commodore as "our best bundle yet".

As exclusively revealed in *Express* 90, the Screen Gems bundle comes with a line up of new games and software packages including:

- **Mindscape's high speed stock car racing game *Days of Thunder*. It's brand new, based on the Tom Cruise film of the same name and likely to be a huge hit.**
- ***Back to the Future II* from Mirrorsoft features five levels of arcade action lifted from the Speilberg's smash hit film.**
- **Ocean's intriguing subterranean adventure *The Night Breed*.**
- ***Shadow of the Beast II* from Psygnosis. The original *Beast* game is still one of the best Amiga games.**
- **Due to its popularity Electronic Arts' *Deluxe Paint II* is being kept in the package. This program offers users the chance to try their hand at all manner of computer art from simple doodles to three dimensional extravaganzas.**

Screen Gems comes with a TV modulator, costs the usual £399 and will available within a couple of weeks.

Meanwhile, a new bundle complete with a range of educational packages will be launched next week. Commodore isn't giving details although it is understood that the package will be broadly similar to the Class of the '90s pack first unveiled a year ago. ■

'A5000' gives an ordinary Amiga incredible speed

AMAZING £400 A500 POWER UPGRADE

A sub-£400 upgrade kit for the Amiga is to be launched which is capable of transforming an ordinary A500 into a machine with the potential of more computing power than a dedicated graphics workstation.

Solid State Leisure's A5000 kit is a compilation of various upgrade modules which, it is being claimed, can improve an Amiga's running speed by 600 per cent and add a huge 4Mb of memory while still maintain 100 per cent software compatibility with Amiga programs.

The A5000 can take the A500 or A2000 into the serious workstation league. Originally from Bulgaria, the circuit board contains a 68020 processor, and in its various configurations can run at 16, 20 or 25MHz. Prices for the three boards are £399, £499 and £599 including VAT and delivery.

All of the boards can support a maths co-processor running at up to 50MHz allowing serious number crunching at high speed.

Many add on accelerator boards for the Amiga have had compatibility problems with straight 68000 code causing games and applications to fail. But the A5000 gets round this with a claimed 68000 fallback mode that allows the machine to run in a normal way.

This true 32-bit upgrade for the Amiga is installed by simply removing the 68000 chip from the Amiga motherboard and inserting the board into the empty socket. No soldering is required – but it's not a job for someone who doesn't feel happy opening up the Amiga and thereby invalidating the machine's guarantee.

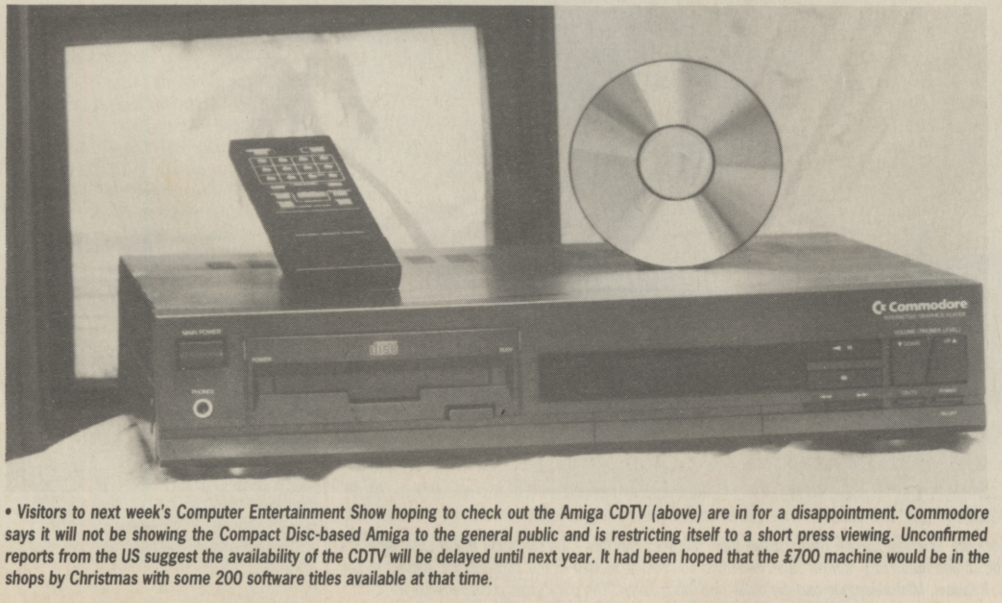
In short, the A5000 is 30 per cent faster than the 20-Card that it supercedes and also allows the lesser Amigas an economical entry into the higher levels.

For serious buyers a brand new A500 with A5000 card, hard drive, monitor and all the other extras necessary to do the job of a workstation could be put together for under £2,000, a considerable saving on the cost of a workstation or even Commodore's own Amiga 3000.

Solid State's boss Mark Tenney told *Express:* "Using the A5000 any Amiga owner can upgrade past the Amiga 3000 and into the realm of a workstation."

It will be available in two weeks. For more information call 0933 650677. ■

NOW YOU SEE IT, NOW YOU DON'T...



• *Visitors to next week's Computer Entertainment Show hoping to check out the Amiga CDTV (above) are in for a disappointment. Commodore says it will not be showing the Compact Disc-based Amiga to the general public and is restricting itself to a short press viewing. Unconfirmed reports from the US suggest the availability of the CDTV will be delayed until next year. It had been hoped that the £700 machine would be in the shops by Christmas with some 200 software titles available at that time.*

• *A real Suzuki and the computer's view.*

Speed freaks

Now the high-speed – and rarely vertical – world of 500cc bike racing is available to Amiga and ST owners everywhere.

Gremlin has launched *Team Suzuki* and is insisting that it's so good even they never tyre of playing it (sorry).

In the finest traditions of games development, Gremlin went along to Donnington Park to show Garry Taylor (the boss of the real life Team Suzuki) how the game was progressing just before the British Grand Prix – won by Kevin Schwantz on a Suzuki (lucky that).

The game takes place over a complete Grand Prix season and accurately represents all the tracks. The player can view the action from the stands as well as from on the bike and this point of view was developed from videos shot from the front of an actual Suzuki. ■

JAM today

Amiga enthusiasts are being offered a new fanzine which will be concentrating on the applications and programming side of the machine.

***Just Amiga Monthly* will be written by ardent Amigaphiles hoping to pass on their techie know-how. There will be regular listings, features on AmigaDOS and communications as well as reviews of the latest in public domain software.**

***JAM* will be produced on Amigas and will be edited and produced by Jeff Walker and Alex Aird – the team responsible for the popular CPC fanzine *WACCI*. It is subscription only with UK rates at £19.95 a year. Call 021-327 2696 for further details.** ■

Lukewarm welcome for anti-hacker act

The Computer Misuse Act came into force on August 29 and got a mixed reception.

The act, introduced as a private member's bill by Tory MP Michael Colvin, makes hacking (obtaining unauthorised access to a computer system) an offence carrying a penalty of up to six months imprisonment. There are two other clauses which penalise hacking with intent to commit further offences, and unauthorised modification of computer material. This second clause is designed to cover both computer viruses and malicious damage to files and carries a penalty of up to five years imprisonment.

Peter Summer, author of *The Hacker's Handbook*, has always felt there was no need for the new legislation and feared that this new Act could make it harder to prosecute criminal hackers.

Scotland Yard's computer crime squad is to be enlarged (there are four of them at the moment) and a spokesman said: "It all depends on people being aware a new crime exists and reporting offences to us."

The National Computing Centre warned that the act "will deter some potential hackers and fraudsters but is not intended to replace the need for good IT security practices. The difficult part will be catching the miscreant and then demonstrating that they did not have authority to access or modify the system."

A further drawback is that, like any new legislation, it will be challenged by defence lawyers who will argue over the definitions used in the wording of the act.

This could make the first prosecutions long, costly – and from the Crown's point of view - not always successful. ■

Computers seen as macho in primary schools

MICRO 'BULLY BOYS' SQUEEZE OUT GIRLS

Girls at primary schools are being driven away from class computers by bullying schoolboys who are turning the technology into a vehicle for 'masculine posturing'.

This claim is made by Dr John Benyon, the head of communication and media studies at the Polytechnic of Wales, who has made a study of several common masculine subcultures – including rugby players, boxers and martial arts enthusiasts.

His observations of 10-year-olds using an educational computer game showed that boys dominated the screen, insulted the girls' efforts and pushed them into the background.

Addressing the British Association for the Advancement of Science he said: "There were numerous examples of girls becoming so bored and frustrated at being excluded that a deep resentment towards and a dismissal of computers was brewing ... these 10-year-old girls were cutting off. I suggest that across the country generally this is the case.

"Computing is becoming a new area for boys to encode masculine values," he added and called for an examination of the cultural content of video games.

He explained: "Some researchers argue that computer games are frequently racist, sexist, militaristic and competitive in format, emphasising the joys of technical domination and mastery." Quite. ■

WATCH OUT FOR THE MUTANT NINTENDOS

TEENAGE MUTANT HERO
TURTLES
Nintendo
ENTERTAINMENT SYSTEM
PALCOM
SOFTWARE

• Those pizza-munching sewerdwelling baddie bashers the Teenage Mutant Hero Turtles have mutated into this – the Nintendo Mutant Machine. It's likely to appeal to just about anyone under the age of 12 and features a control deck, two hand controllers as well as the Turtle game. Expect to see hundreds of TV ads for this pack featuring Leonardo, Raphael, Michaelangelo and the other one this autumn. The pack costs a respectable £79. ■

New Amstrads on the way

This month will see the release of Amstrad's new top-end business range of computers – dubbed the 3000 series. The machines are likely to be beefed up versions of the 2000 series with structural improvements and minor performance tweaks.

Following a presentation to distributors and larger retail customers, the company is talking to dealers this week and has already briefed sections of the business computer press. The machines involved include a 286, 386 and a 386SX – all repackaged, redesigned and internally revamped to effectively push the PC2000 range further up market.

So far the reaction from invited audiences seems to be favourable. There is, as yet, no indication on price, but from Amstrad's point of view there is little point to the exercise unless PC3000s cost more than the 2000 range. Considering the way PC prices are moving at the moment however, this differential could be relatively small. ■

Showbiz at the CES

At noon on Thursday September 13, the first day of the EMAP Computer Entertainment Show Ester Rantzen and Frank Bruno will arrive to officially open proceedings - and they are unlikely to be the only famous names on view.

Radio One will be recording at the show, also on the Thursday, with selections being broadcast on Philip Schofield's show on the Sunday. Several industry characters such as Ocean's Robocop and Mirrorsoft's Mutant Turtles, will be making an appearance and rumours abound of various pop stars popping in as well. One 'celebrity' who is definitely going to cause a stir at the show is the Super X flight simulator - a great succes at the PC Show back in 1988. ■

• For full details of the CES show, turn to our preview on page 46.

A fair cop

The latest in PC data security locks is called Policeman and has been developed by Plus 5 Engineering.

The device locks the entire computer, records unsuccessful attempts to enter the system and will set off an alarm on the third try.

Attached to the PC is a small, external enclosure which can read an electronic tag - which bears the PIN number of each authorised user. These 'Plus Tags' can be engraved with the user's name and are small enough to be carried on a key ring.

Once the Policeman has been attached to a computer the *only* form of access is by tag and PIN number - there is no 'back door' .

There is an added security level in the form of data encryption if required.

Policeman costs £199, Plus 5 Engineering can be contacted on 0892 663211. ■

Ocean drops budget prices

Ocean, the UK's most successful games specialist, is about to enter the 16-bit budget market with prices certain to be less than £10.

In the past the company has enjoyed outstanding success with titles like *Robocop, Operation Wolf* , *Batman* and *Rainbow Islands* – so it's not impossible that even these might turn up on the new label.

At the moment, although the decision has definitely been taken, the company is reluctant to give any details of titles to be released, or even an accurate price. However five or six titles will be released in the first batch, probably during the Computer Entertainment Show at Olympia (13 – 16 September), followed by two a month thereafter.

The problem lies in providing a price low enough to encourage impulse buying, while still covering the high mechanical costs associated with 16-bit. This will certainly be less than £10, with £7.99 as the most likely choice.

Ocean already has the popular Hit Squad budget label for 8-bit games and that label is likely to be retained for this new 16-bit venture, perhaps with a redesign on packaging aimed at ST and Amiga users. ■

Double up

PC users will soon be able to double the effective capacity of their hard disks, following the development of a new utility by Vertisoft Systems of San Francisco, California.

Called *DoubleDisk*, the memory-resident utility can be installed from a floppy and creates an additional, logical DOS 'extended disk' from a portion of the hard drive - without reformatting it.

Whenever a file is saved to an extended disk, *DoubleDisk* automatically compresses it by an average 50 per cent. Files anywhere in the system are accessed normally, whether on the extended disk or standard DOS drive. There are no UK details as yet ■

Amiga 3D

A breakthrough in ray-traced animation software for the Amiga, called *Real 3D*, is to be distributed in Britain by The Amiga Centre Scotland, following a deal with Activa Software of Sweden

***Real 3D* is claimed to be the fastest ray tracing program available for the Amiga and will come in three versions. The beginners package will include all the features except macros and Boolean operations and will run with 1Mb of memory.**

***Professional* is the full package, but requires 3Mb, and *Turbo* is another 3Mb full package, especially written to take advantage of more powerful chips like the 68020 and 68030.**

Features of *Real 3D* include: various materials (glass, mirrors, etc.), texture mapping, unlimited light sources, surface mapping, true solid modeling, real time wireframe preview, hierarchical structures and quick animation preview. ■

The computer dealer who never was

Several UK distributors have been defrauded by a con artist who has impersonated well known dealers and ordered equipment to be delivered to third parties. The value of the kit obtained has varied between £3,000 and £20,000

A police spokesman explained: "He has telephoned distributors and claimed to be a dealer with whom he knew they had a credit arrangement. He would then ask for urgent delivery to be made at a third party address at a specified time and intercept the equipment, either at the foyer of a building with a computer company in it or at an office he'd rented for the occasion."

The thefts only came to light when invoices were queried, but sometimes not until months later.

Police were called in after a distributor, who prefers to remain anonymous, received an order from an unfamiliar name claiming to be from a regular customer. The shipping address turned out to be false.

A man has been arrested and charged and magistrates have referred the case to the Crown Court. ■

Californian granted patent for the microprocessor

MILLIONS AT STAKE IN BATTLE OF THE CHIPS

A 52-year old Californian computer engineer has finally been granted a patent for the invention of a computer on a chip in 1968. His battle to be recognised as the man who was first with a fully integrated circuit computer could cost the industry's chip manufacturers a fortune.

Gilbert Hyatt has been fighting the Californian Patents Office for the past 20 years to get his patent recognised. He originally filed his patent, entitled 'Single Chip Circuit Computer Architecture' in 1970, but had to face two denials and two appeals before the office finally agreed.

This means he patented the idea before multi-million dollar corporations such as Intel, Texas Instruments and Motorola. The legal implications have to be worked out, but these companies could owe Hyatt millions of dollars.

It has always been taken as fact that the originators of a computer on a chip were one of Intel's development teams. However, their patent was filed later than that of Hyatt.

Hyatt said last week: "The work I did is the forerunner of PC. I don't know if all PCs are using the same technology in the patents, but they sure stem from the work I did."

He says he won't be seeking retroactive payments – which would run into billions of dollars – but could be eligible for royalties on all computers which contain his technology.

Brian Rooney of United Press International reported: "Silicon Valley patent attorneys said Hyatt's patent appeared on its face to be very broad and could cover virtually all types of microprocessors. If so he would be entitled to royalties for all microprocessors manufactured for 17 years after the patent was issued."

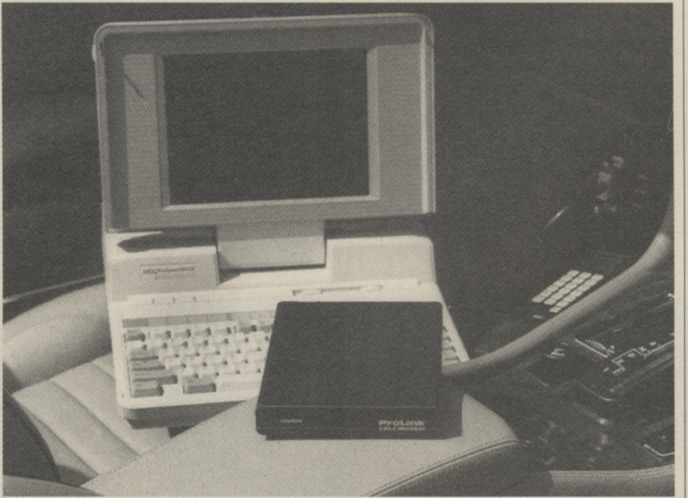
According to Newsbytes, if Hyatt was to take an 0.5 per cent royalty on Intel's and Motorola's yearly revenues he would make $22 million. Hyatt says whatever money he gains will be sunk into new scientific projects.

When the original patent was filed he ran a company called Micro Computer Inc, but that foundered in the early 1970s. Hyatt says he isn't bitter at not being recognised but claims that, had he been given the money in the first place, he could have come up with some "really marvellous technology".

Whatever the outcome, Hyatt is likely to be embroiled in some sticky legal battles for the next few years.

- On news of the verdict coming out, Intel's share price took a dive on the New York stock exchange. ■

COMMS FROM THE CAR



• NEC has launched the first cellular modem for on-the-move communications. The ProLink CDLC transfers data by cellular radio waves in exactly the same way as a car telephone. It is compatible with Vodafone and Cellnet networks in the UK and operates at a moderate 2,400 baud.

NEC is researching an all-in-one office for the car and is already offering a bundle of portable computer, car telephone, car fax and cellular modem.

The CDLC costs £695. Contact your local dealer for more information. ■

Plastic Macs arrive at last

Three 'economy' Apple Macintoshes are in production in California, with delivery scheduled for the autumn, although full details are only available on two: the Mac IIsi and the LC.

The Mac IIsi is a high performance machine with built-in 8-bit colour, similar to the IIci, plus a single slot that can be used to run Processor Direct Slot cards or NuBus cards. It's about 1.5 inches shorter than the three-slot IIci with a logic board a third smaller and looks rather like an Apple IIGS. It uses a 20MHz 68030 processor, which makes it six times faster than the Mac Plus, and it will accommodate up to 17Mb of RAM.

There is also a built-in 8-bit audio digitiser and a microphone jack on the back and a microphone is expected to be included

The LC is an inch and a half shorter than the IIsi and will not be as expandable. There's a 20MHz 68020 (2.5 times faster than a Mac Plus) with built-in 8-bit colour and up to 9Mb of RAM on the motherboard.

The third Mac is the Classic which will have a 8MHz 68000 processor and a mono monitor – it has no expansion slots. ■

COMMENT

We're ringing the changes at Express next week, so watch out for a lot more of what you like to read about in future issues

As of next week we'll be running five new sections which will make Britain's most popular computing weekly even better. Back comes regular games coverage in the form of Games Week, handled by *ST Format* supremo Mark Higham, and there'll be a big welcome each week to Mr. Wirehead UK himself, Keith Pomfret, for his Circuit City page. Here he'll be showing you how to get your hands dirty the easy way with an indefinite series of practical tech tips. Meanwhile Tim Smith will be turning his not inconsiderable humour to Centrefold – a double page mish mash of info and comment he'll only describe as "wild, willing and by no means innocent". Also, what seems to be the millions of pieces of new console hardware and software released each week will get a thorough airing in their own Zone, and, finally we'll be taking a weekly look at the world of comms in Express On-Line.

So what else is changing? Well, we'll be increasing our news coverage up to a regular eight pages and continuing our extensive feature coverage of everything digital this side of Pluto. We'll also be working overtime on making sure our competition prizes have no competition.

What do we have to give away in future? Oh, an arcade machine or two, a couple of laptops, a brace of consoles... and that's just the next few weeks.

But one of the biggest changes you'll notice will be Shopping Express. We're afraid it's goodbye to the Buyer's Guides and to our columns for the MSX, PCW, QL, SAM Coupé and BBC. To be blunt, we no longer think they're worth the space they take up.

But that's not to say we'll be dropping coverage of these machines entirely. As and when news arrives we'll be passing it on to you through our news pages. Oh, and by the way, we're bumping up our Archimedes coverage to a full page every week.

So there you go. Judging by the hundreds of questionnaires we've had returned, it's more news and machine specific information you, the reader, want and from next week that's exactly what you'll be getting.

Just remember though you can help us too. We're not so busy putting this all together that we don't have time to take your calls.

We're always on the look-out for news leads and tip-offs, even feature ideas and reviews. So give us a call on 0225 442244. Otherwise you can always get in touch with us on CIX as astorer, Telecom Gold as 84:TXT152 and Compuserve as 76011,1124.

So, see you next week in print and if you happen to be going along to the CES show at Olympia we'll see you in person as we'll be there producing *Express* live. ■

> *More news and machine specific information is what you, the reader, want and that's what you'll be getting*

FROM The ARCHIVE

ONE YEAR AGO

CONSOLE CLONE WAR

A Nottingham firm was accused of pirating Nintendo cartridges using a £150 Taiwanese gizmo and selling them in the UK minus title screen for £2 each.

Console pirates will have to think bigger this yea r though as UK firm Active has gone one better and instead of selling console games is selling an entire arcade console complete with boards straight from the real arcade machines.

KONIX CONSOLE CALAMITY

The Konix ambitious Multi-System console was again 'temporarily delayed' causing the company to cancel TV advertising and leave the Konix stand at shows bare.

The Welsh joystick manufacturer seemed to have bitten off more than it could chew at the time and even twelve months later the space age sit 'n' ride has still to appear.

JAIL 'EM

The Copyright, Designs and Patents Act that came into force on August 1 meant that company directors could be held liable and jailed for up to two years for allowing illegally copied software to be used or distributed within their company.

There haven't been too many directors transported to the colonies yet but the deterrent has at least made some companies think about the wisdom of allowing PCs to fly the black flag.

Now if we could just give a pirate a virus.

VIRUS COLLECTION

Ian Hirst, author of *The Virus Bulletin* started a collection of PC viruses in order to keep up with the latest strains

WHOOPS

Mini Office Professional Plus finally went on sale after months of delays but instead of curing the problems caused by the bugs in the original, it exacerbated the problem with a new clutch of its own bugs.

DEATH RAYS

Sun spots were being blamed for crashing the complex Stock Exchange network in Toronto, Canada.The system, which had previously been thought of as sturdy, proved sensitive to the solar electromagnetic disturbance caused by the sunspots.

HANGING WELL

The market for those things that hang on top of your monitor and keep your copy where it can be easily read was worth £13 million pounds a year with a growth rate of 25 per cent per annum

That's £17 million this year and nearly £22 million next year.

OOH LA LA!

A computer in Paris went potty and sent over 40,000 motorists official letters charging them with a variety of offences ranging from murder and manslaughter to mopery and keeping a brothel.

In the four days that it took to organise apologies, several marriages were claimed to be in danger because of the problems.

GIZZA QUID

An Inland Revenue super computer that could cut tax bills by up to 25 per cent by catching all the non-payers was installed. The 10 gigabyte relational database has been in situ for a year now but there is no sign of the predicted savings. At least not in our pockets!

THE RIGHT GEAR

UK company Wellington transmission consultants claimed to have found a cost effective way to convert a standard manual gearbox to fully automatic transmission by adding a small computer, solenoids and servos.

The £3,900 conversion was obviously a little expensive for the average car user, particularly when Swedish Aerospace giant Saab-Scania was already offering a similar system for its trucks and buses for half the price.

FLYING AWAY

Plessey launched a system for playing computer games in aircraft. The system attached to the back of the seat in front of you and consisted of a hand-held monitor and keyboard.

Poker and fruit machine simulators using real money were predicted.

Plessey reckoned that the system would be fitted to aircraft as a matter of course by 1991.

TWO YEARS AGO

SEVERAL LAPTOPS

A 'portable' computer proved so portable that a train guard in Japan ruled that it took up enough space to warrant a levy of TWO extra fares.

Two years on, the Poqet PC and other notebook computers are managing to hide in pockets and sneak on to trains without paying.

Sources: *Express*, *CTW*

EDITOR • Andy Storer
DEPUTY EDITOR • Stuart Anderton
NEWS EDITOR • Colin Campbell
ART EDITOR • Amanda Cook
TECHNICAL EDITOR • Keith Pomfret
STILL STAFF WRITER • Tim Smith
CONTRIBUTORS:
Rob Ainsley • Maff Evans • Steve Carey
Robin Alway • Andrew Brown Keith Neal • Jason Holborn • Rod Lawton • John Torofex • Pete Gerrard • Mark Higham • Adam Waring • Matt Nicholson• Ken Coumarin
ASSISTANT PUBLISHER • Jane Richardson
CIRCULATION DIRECTOR • Sue Hartley

ADVERTISEMENT MANAGER • Helen Kirkhope
AD EXECUTIVES:
Phil Davenport • Tim Partridge • Cheyl Beasley
AD ADMINSTRATION • Jo Fulton
AD PRODUCTION • Tracy O'Donnell
AD TYPESETTING • Terry Turner
PUBLISHER • Graeme Kidd

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DOIN' THE DOO WITH MUSIC-X

It seems that Microlllusions' *Music-X* (see below) is gaining loyal followers among the rich and famous. One of the latest stars to jump on the *Music-X* bandwagon is none other than Rythm King's own, Betty Boo, who has had several chart hits in recent months including *Doin' the Doo* and *I Can't Dance (To the music you're playing)*. Betty joins such big names as Courtney Pine and Prince, whom Microillusions' claim are loyal *Music-X* fans.

JUNIOR ARRIVES

Once again Microlllusions has made us all very happy by announcing that it's finally released the budget version of *Music-X*.

Contrary to previous reports, Microillusions has decided to sell the program for an ultra low price of £80, which compares very well with the two other major budget sequencer systems available from Dr.T (*Tiger Cub*) and Passport (*Trax*).

Music-X Junior offers 250 tracks of real time MIDI recording with comprehensive sequence editing using a powerful piano roll like bar editor. The program fully supports Amiga sampled sounds, therefore allowing multi-voice compositions to be built up from the simplest of hardware set-ups. Extra facilities include a MIDI filters page that acts like a MIDI patchbay, allowing MIDI data of various types to be channelled here, there and everywhere. Look out for a full review of *Music-X Junior* in a future issue of *Express*.

For more info, give Microillusions a bell on: 0480 496497.

VICTORY IN THE GULF

It had to happen. Yes folks, with the current tension in the Middle East, Parsec Software has released a computer game called *Operation Spruance* that bears more than a slight resemblance to the Gulf crisis currently dominating the headlines. However, the aggressor in this game is not Iraq, but its arch-enemy Iran.

The plot goes like this. Iran has provoked a tense situation within the Persian Gulf by attacking civilian merchant shipping.

To counter this threat, US naval forces have been dispatched to the region. However the USSR is keeping close watch on your actions, having already threatened to step in if the US forces go too far...

Operation Spruance is a naval warfare computer simulation based around the US Navy's Spruance class destroyer. The game boasts solid 3D graphics that give you a spectacular view from the bridge of your destroyer. To help you save the ship from Iranian attack you have at your disposal some of the most advanced computer equipment available. These include advanced early-warning radar, weapons control systems and realistic navigations equipment.

Operation Spruance is available for £24.95 from the Software Business who can be contacted on: 0480 496497. Rumour has it that Saddam Hussein has already ordered a copy for his Amiga!

AMOS UPDATE

I was recently lucky enough to be able to have a quick 'chin wag' with Francois Lionet, the programmer responsible for Mandarin's AMOS system. Francois informed me that he is currently working on an upgrade to AMOS that will include many enhancements suggested by users.

AMOS 1.2 will include the complete removal of all known bugs (which, as Francois pointed out, does not neccessarily mean that AMOS is now totally bug free), a brand new file requester that is compatible with multi-tasking, an all new sprite flipping facility (that removes the need to store a sprite as both a normal and reversed image), plus several new commands (which provide increased support for multi-tasking).

After completing AMOS 1.2, Francois intends to start work on the AMOS compiler. This shouldn't take too long, as Francois intends basing the Amiga version around the existing STOS compiler.

Once this is complete, Francois intends extending the AMOS and STOS series still further with the release of a PC version of AMOS, (the obvious name is PCOS but Francois didn't seem to like this name at all).

Also on the drawing board is an enhanced version of STOS (called STOS Professional) which will basically bring STOS up to the same level as the current release of *AMOS*, plus full support for the latest ST model, the STE.

SODAN 2 SOON

Fans of Discovery's highly acclaimed *Sword of Sodan* game will be pleased to learn that Innerprise Software is soon to release a follow up to it.

Sword of Sodan 2 (imaginative lads, the Inners!) will carry on where the first game stopped, offering even more hacking and slashing for blood-thirsty gamesters.

Also new from Innerprise is *Aviator*, the follow up to one of the greatest arcade games of all time, *Battle Squadron*.

There are no more details yet, but it is believed that *Aviator* offers a greater feeling of 3D.

Jason Holborn

MUSIC X NEWS

Music-X
By David Joiner
Copyright © 1989
Microlllusions

• *Bug-busting Microlllusions has finally released an upgrade to* Music-X.

After months of waiting, Microlllusions has finally released the upgrade of its successful *Music-X* MIDI sequencing system onto the European market. The upgrade has been available Stateside for several months now, but has failed to reach UK users.

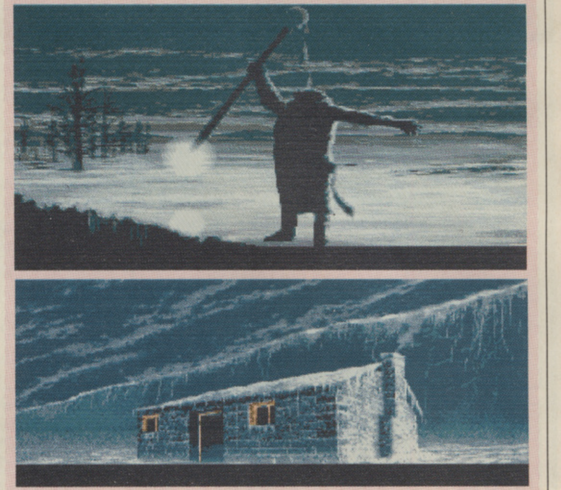
For registered users, the upgrade is available for just £19.95 when you send both your *Music-X* disks back to Microlllusions at its usual address. Anyway, here's what the new version has to offer:-

- Multi-serial capabilities - *Music-X* now has the ability to communicate with more than one serial port at a time. It can talk to up to eight serial ports simultaneously (using a serial port expansion card such as that available from ASDG Inc.) in both directions, therefore allowing *Music-X* to address a theoretical 128 MIDI channels simultaneously.
- Event sculpting – This new feature allows you to 'sculpt' note velocities, continuous controller values, aftertouch, pitch bend etc using the mouse. By simply dragging the mouse across the bar editor screen, *Music-X* will redraw the particular control to conform directly to the path of the mouse.
- View controllers - You can now choose to display one type of controller at a time, or all controllers simultaneously.
- Velocity flattener - This works just like the *Music-X* velocity scaler, except that it sets the velocity to a constant value (which can also be ramped or randomised).
- Lock channels – It is now possible to lock the current MIDI channel from within the bar editor. This makes it easier to selectively edit data for a particular channel from within a multi-channel sequence.
- Sample tuning and envelope editor - Sample envelopes and tuning can be edited in realtime while sequences are playing.
- Bug fixes - All reported bugs from *Music-X 1.0* have now been removed.

SHADOW OF THE BEAST II

AMIGA GAME of the WEEK

Psygnosis • £34.95



After defeating Maletoth, the Beast Lord, and his servant Zelek, the Beast Mage, the warrior messenger has managed to regain his human form and return to the safety of his family once more. The Beast Lord is none too happy about Zelek and his minion's bunglings that have allowed the messenger to escape, and so instigates a search for another child on which to carry out their macabre experiments.

After months of searching, one of Zelek's slaves returns to his dark tower to inform his master that a suitable child has been found. Zelek transforms into his beast-image and flies off to find the baby. When he reaches the home of the child, thoughts of revenge against the messenger grow – since the child they have found is his sister. With malice in his heart he swoops down and snatches the baby from its mother, flying off over the mountains to the realm of the Beast Lord.

You play the warrior-messenger from the original game, this time in human form. You must travel through the realm of Kara-Moon in an attempt to rescue your baby sister from the evil Beast Lord. Along the way you come across various creatures, some of them the mutated servants of Zelek, who will stop at nothing to try and destroy you, some are simply warrior-like tribes people, who will defend their lands to the death, and others are friendly beings – tired of living under the rule of Maletoth and Zelek – who will give you hints to help you on your way.

As you'd expect from Psygnosis, the presentation of *Shadow of the Beast II* is very polished, with an atmospheric intro-sequence leading into a game with superbly designed graphics and ethereal sound effects. The technical prowess of the game isn't as impressive as its predecessor (the five-level parallax scrolling has been simplified to a simple two-level, multi-directional scroll), but on the whole more care seems to have been taken to evoke a dark and mysterious atmosphere. The gameplay too has been improved, with more frantic action and a range of weapons to use in battle. The inclusion of puzzles and clues gives the game a more adventurous leaning than the original, and make the proceedings a much more interesting and addictive going.

Even if you weren't too impressed with *Beast I*, give the sequel a try. The feel is more moody and the gameplay more involved – in fact it seems as though Impressions has taken heed of the criticism given to the original, and made *Shadow of the Beast* the game it should have been.

Maff Evans

THE ATARI ABC

Now, there's a PC-AT compatible that not only solves problems like other AT compatibles, it also solves the one problem that its predecessors have created ... affordability.

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The ABC is a reliable, high performance computer, built to exceptionally rigorous standards. It is well designed, to a state of the art specification, maintaining maximum expansion capability for the future. This includes up to 4Mb of RAM and 3 AT expansion slots. Plus, unusually for a PC at this price, the ABC has the ability to install two or three extra drives, with the cabling already inside the CPU.

The ABC has a host of impressive features, all built-in as standard, encouraging simple installation and ease of use. In addition, the ABC's small footprint and quiet operating, mean that you will notice it less on your desk than other PC's. Except, of course, when you begin to take advantage of its AT power.

At its remarkably low price point, the ABC is ideally suited for home, office and educational use and will take full advantage of the vast range of PC compatible software. And, with 12 months FREE on-site maintenance (8 hour response), you can rest assured that your ABC will be fully supported.

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ST

DPAINT SUPPORT ALREADY

Already it looks as if *DPaint ST* (see box right) is winning support and influencing people. A set of compatible programs called *Real Things* is well under way, offering a set of animation files that take full advantage of *DPaint*'s facilities in that department. When you buy your copy of *DPaint* you'll find a card enabling you to get *Real Things*.

ATARI TAKES TO THE ROAD

Details are being finalised of the Atari road show, a six-city tour that brings leading developments in ST hardware and software to the doorsteps of those who cannot make it to the noisy and crowded Computer Entertainment Show (Earls Court, Saturday and Sunday 15-16 September: see you there!).

Atari won't be on it's own either, for it's taking with it Microdeal, Third Coast Technologies and Mirrorsoft. So whether you use your ST to make words, tunes or pictures you're bound to find something of interest.

A fortnight ago I was critical of Atari for not going to CES, much to the company's displeasure. Still, if the tour lives up to its ambitious plans I shall be the first to congratulate all concerned. It's certainly a great idea and we wish Atari all the best with it. I shall be there at at least one of the stops – hope you will too.

Watch *Express* for more details of dates and venues, which will also be advertised in local media.

BRAVE, BRAVE BOYS

"While reading issue 93 of *Express*," Robert Forsey tells me, "I came across your request for details of any programs/PD libraries/user groups and so on for the ST."

And so? "And so I'm pleased to tell you that a couple of friends and I are in the (painful) process of setting up a small software house specialising in budget ST software." Games will sell for £5.99 including p&p.

Brave indeed. Even braver is the polemical angle The Digital Dimension (for so it is called) is taking. "Fighting back against the corporate giants," it proclaims. "Is *Batman* really any better to play than the classic game *Jet Pac* on the humble Spectrum, at the equally humble price of £5.50?"

And it goes on to make this wonderful promise: "We guarantee that any software sent in for evaluation will be dealt with promptly by our team of hardened games players and a prompt and constructive reply sent." With the emphasis on playability and value for money The Digital Dimension hopes to "bring back a little of the excitement from those early days."

Excellent stuff, though a little too much in the rose-tinted nostalgic spectacles for my liking (the Spectrum was only good for its time – you wouldn't want one now). Digital Dimension's first £5.99 game is *Jiggler*, billed as: "the game that blows your mind."

It's certainly no *Space Ace*, and no *Xenon II* either, but with the emphasis on playability and affordability it's more like *Tetris* or *Pipe Mania*.

Still, the second Digital Dimension game has been announced, which may give some cause for concern. *Fruit Pursuit* is claimed to have the 'addictive qualities of a fruit machine and the skill and strategy of a board game.' Sounds deadly.

Anyway, to order *Jiggler* or discuss submission of your own game, get in touch with: The Digital Dimension, 85 Watleys End Road, Winterbourne, Bristol BS17 1PW. We wish the venture well.

K-SPREAD WATCHES TV

Kuma Software has launched a Teletext version of the *K-Spread* spreadsheet, enabling share price information to be downloaded automatically via Oracle and Ceefax.

This is not the first software to take advantage of the system: two months ago two stock market share programs were released that did likewise; *Market Breaker*, £69.95, phone Jewsbury on 0705 595694; and *ProShare*, £49.95, TC Developments, 0937 61145.

Of course you'll also be needing the special Microtext teletext adapter, which ain't cheap at £129.50. Still, it does mean you can let the stockmarket and your ST talk to each other at their leisure while you concentrate on becoming a millionnaire.

K-Spread costs £149.95 from Kuma on 0734 844335.

MORE POWER PER INCH

Hard disk drives are getting faster and cheaper all the time. And now, Power Computing has decided, it's time they got smaller, too. The latest model measures a titchy 23cm by 10cm by just 3cm, and looks more like a floppy drive than anything else.

The new design also does away with the need for those noisy fans, so it sounds like a floppy too. Prices for the drives, which go up to a whacking great 110Mb, begin at £299.

Call Power Computing on 0234 273000 if you fancy a bit more desk space.

CAREBEAR FOR SALE

A second and entirely warranted mention for *TCB Tracker*, an early version of which I've been thrashing for days and nights. I shall stick my neck out and call it the best low-price music program ever released for the ST.

I'm something of a 'Terry Lackwit' in the music department, so if I can get lots out of it then anyone can. But that's not to say that people who know what they're doing won't find it worth their while – my colleagues on *Express* have been well impressed.

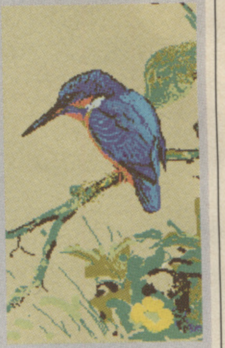
It's a brilliant package altogether, and congratulations must go to programmer Anders Nilsson, the chap responsible for the brilliant music on the Carebears demos. And it's really amazing what you can do. You can, for instance, tweak music while it's playing up to four samples simultaneously.

TCB Tracker, which makes its first public appearance at the CES Show, is also fully MIDI compatible.

By all means look at it at CES, where it's on sale for £49.95, but if you want to save a tenner order it direct from: MPH Computers, 10 Chandlers Court, Eaton, Norwich NR4 6EY, or by calling 0603 503382.

Steve Carey

DPAINT BOOSTS ST



The news last week in *Express* that Electronic Arts has finally capitulated to popular demand and released an ST version of its classic *Deluxe Paint* art program is cause for celebration.

It's not as if the ST isn't well served in the art department – the public domain programs *Neochrome*, *Degas Elite* and *Spectrum 512* have all done their bit to take advantage of the ST's excellent graphics capabilities.

But nothing comes close to the £50 *DPaint ST* package. It is brim-full of features and functions that go way beyond what has been done before. There's even a complete animation system, something which I think I'm right in saying has only been available in the excellent *Cyber Paint*.

What may raise eyebrows, however, is *Express'* revelation last week that *DPaint* has nothing to do with Dan Silva, the man who worked for four years on that series on other formats.

For one thing the icon system, familiar to anyone who's seen the program on other machines, has been repositioned so that they're now horizontal rather than vertical at the side of the screen.

In fact *DPaint* began life not as *DPaint* at all, but as a program brought to Electronic Arts and taken over and developed by them.

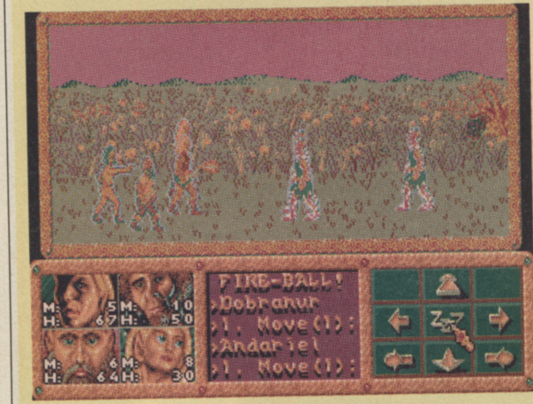
But you don't have to take my word for it that *DPaint* ST is in the same class as its predecessors.The October issue of *ST Format* has a fully useable demo on the cover disk, featuring everything except some of the animation elements and, of course, the save option.

Get yours, either at the CES Show (see page 50 for full details), or at your local newsagent from Thursday 13 September.

DRAGONFLIGHT

ST GAME of the WEEK

Thalion/Active • £34.99



It's been three years in the pipeline and has been handled by three different UK distributors before ending up in Active's lap. Now *Dragonflight* is ready to storm onto the adventure scene and all the signs are that it's got a healthy future ahead of it. Already number one in Germany, *Dragonflight* has all the essential ingredients necessary to see it climb the UK adventure charts faster than an Inter-City.

The game comes with a 104-page novella which tells the story of how magic and dragons, once bountiful in the region have all but vanished. Your objective is to save humans, dwarves and elves from evil powers. To accomplish this task you control four characters – a human, an elf, a wizard and a dwarf. Each of them start the game with limited amounts of food and money, and one of the 'four rings of Stasis'. The wizard also carries a piece of the map. As you explore the enormous landscape you may collect the other 11 pieces.

The game is played out on a large map with a panel running along the bottom of the display. This panel shows your four characters and lists their inventory along with movement and spell icons. The map itself gives an overhead view of the landscape in a similar fashion to the *Ultima* games. You can frequent shops, inns and visit the residents of houses. When you come up against enemy monsters the display changes to view characters from the side. Combat proceeds in turns, with you advancing each member of your team forward until you're in the line of sight of the enemy. Dispatch a well-timed fireball and you can win the battle. Such battle sequences are fun and certainly liven up the action.

It's unfortunate that adventure programmers refuse to come up with any original game scenarios. *Dragonflight* successfully incorporates elements from other popular role-playing games but it's in dire need of something original. A unique plot with scope for varied graphics would have given it the edge it needs. As it is the game is going to give you hours of entertainment, but if you're already engrossed in any of the *Ultima* series or *Dungeon Master* games you're unlikely to see the point of splashing out another £35 on this one.

Mark Higham

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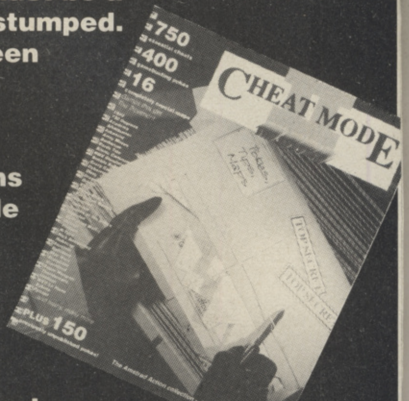
NEW COMPUTER EXPRESS OFFER

CHEAT MODE II THE REVENGE

If you have a CPC, there must be a game which has had you stumped. There has got to be a screen or end-of-level baddie which you just can't beat. You must be getting frustrated with various screens which you never seem able to complete. But fret no more; the answer is here.



Cheat Mode II The Revenge

Compiled by Britains biggest selling magazine CPC magazine and New Computer Express's sister; Amstrad Action , this 130 page spiral bound book is crammed with pokes, hints, passwords, maps and tips on hundreds of the best CPC games. In total, over 750 essential cheats can be yours for only £9.99. or buy the book plus tapes (to save you time in typing in the listings) for only £11.99 use the coupon below or ring our hotline number on 0458 74011

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SPECTRUM

PLUS D AND THE DISCIPLES

A fair few Speccy owning households have a Plus D or Disciple disk-interface and although I've never used one myself, the general opinion seems to be that they're absolutely excellent. Designed and originally sold by MGT (the Plus D is still available from Datel Electronics), both these devices bring the hi-tech wonder of a 3.5inch or 5.25inch disk drive to the humble Speccy. I mention them because I've just heard from Barry Turner, the Editor of *Network* - a tape/disk based publication for Plus D and Disciple users. This comes out every month and apparently contains programs, tips and other things of interest for owners of the aforementioned widgets. Each issue costs £1 (£1.50 outside UK) on tape or, 3.5inch/ 5.25inch on disk if you supply one with your order. The address is: 38 Kings Drive, Gravesend, Kent DA12 5BJ. Barry also supplied the following tips gleaned through years of playing around with the interfaces:

1) If you keep all your transferred games on disks separate from other programs, save the system file by first loading the Disciple loader software. First choose not to use the printer, then no flashing border and finally no network. Then, save the system file to your disk of transferred games. Some games, when snap-shotted, don't like the Plus D/Disciple over-writing the printer channel.

2) Keep games with the same first letter on the same disk; this saves you having to have a catalogue or database reminding you which disk you have transfered a particular game to.

3) If you want to name disks it is quite easy, as the Plus D/Disciple only checks the first three letters of the system file. So, for example, to name Games Disk A just change the system file by ERASE d1"SYS*" to "Sys GamesA", or in the case of the Plus D ERASE d1"+SYS*" to "SYS GameA".

GHOSTS

I'm proud to present the third and final part of *Ghost*, the program that decreases swearing, high blood pressure and the practice of hair tearing by making your Plus 2A or Plus 3 compatible with loads of Speccy software that just wouldn't load before. To get it working, simply type in the entire listing that's been printed in the last two issues of *Express* with the final part appearing below. Run it and, if everything goes according to plan, the computer will reset. Now type in Listing 2 (the two line program below), and then Run 20 to save a few copies. If you can't summon up the energy to bash the whole thing out or by some huge oversight missed the appropriate issues of *Express*, then the entire program can be yours if you send an SAE and a blank cassette (or an SAE and 10p for a photocopied version) to the very clever author: M Harris, 1 Salters Lane, Faversham, Kent ME13 8YD. And if you do send off for it remember to thank good old Miktor for writing it in the first place and bringing a ray of sunshine to Plus 3/Plus 2A owners dismal lives.

```
1165 DATA 32.76.116.228.83
1170 DATA 116,97,114,116,32
1175 DATA 116,97,112,101,44
1180 DATA 32,116,104,101,110
1185 DATA 32,112,114,101,115
1190 DATA 115,32
1195 DATA 17597
```

Listing 2

```
10 CLEAR 27999: LOAD "" CODE
: RANDOMIZE USR 28000
20 SAVE "GHOST v2.0" LINE 10:
SAVE "GHOST.COD" CODE
28000,200: FOR N=1
TO 1000: NEXT N: RUN 20
```

Robin Alway

SAM COUPE

SAM TO SPECCY

It's good to see another respected purveyor of Speccy utilities start producing stuff for the SAM. Kobrahsoft has been a regular fixture in the small ads of Spectrum mags for eons and it's now released two pieces of SAM stuff. Firstly there's the evocatively named *CT2 Tape Backup Utility*.

This allows you to back up your Spectrum software on tape so it reloads, apparently easily, into your SAM. Secondly, Kobrahsoft is selling *CD2 Tape to SAM Disk Utility*, which you won't be at all surprised to hear transfers Speccy software to SAM disk.

As well as doing that it also increases the compatibility of the SAM with the Speccy, so you should be able to get a sizeable proportion of your Speccy favourites up and running on a 3.5-inch SAM disk. *CT2* costs £9.95 on tape and *CD2* £10.95 on disk from: Kobrahsoft Software, 'Pleasant View', Hulme Lane, Hulme, Longton, Stoke-On-Trent ST3 5BH. Faithful old Kobrahsoft has also some appetizing future releases planned for the SAM, including a version of it's very well liked Plus 3 utility *D.I.C.E.* and anything else it can think of.

FRED IS LAUNCHED

Fred is the name of another brand new SAM Coupé fanzine. It comes on disk the first week of every month and includes in the third issue, which should be out by now, exclusive details on SAM stuff from Zenith Graphics and instructions on how to make your own scrolling message - along with all the usual stuff you'd expect to see like reviews, news etc.

The price of an issue is only £1, making *Fred* a veritable bargain. Contact Colin Macdonald, 40 Roundyhill, Monifieth, Dundee DD5 4RZ.

Robin Alway

PCW

PIPS HAVE GONE

The final few options you can use with PIP.

[Tx] Tabs. Changes tab characters into x spaces.

[U] Upper case. Changes all lower case (abc) in the file to upper case (ABC).

[V] Verify. Checks that the file has been transferred by comparing source and destination files.

[W] Write over. Writes over files set to 'read only' automatically – normally it asks for confirmation.

[X], [Y] Nothing!

[Z] Zero parity bit. Sets the eighth bit in each character to zero, effectively stripping out *Protext* printer codes, *NewWord* dot commands etc. etc. Great for converting *NewWord/WordStar* files into sensible ASCII files.

LAST WRITES

What can PCW users look forward to seeing in the rest of the 1990s? Well, here's my guess. The machine will still be around in 1999, that's for sure (when Nostradamus predicts the end of the world, incidentally, at about the time of a total eclipse that will be visible in Cornwall). You'll be using *LocoScript* 4 (with word counter, built-in word sorter and book indexer, and ability to find and replace italic and bold codes) and utilities such as *LocoSpread*, *LocoCalc* (pop-up calculator) and *LocoFax* (pop-up personal organiser). *LocoScript* 4 will be available in 752 languages including Mandarin Chinese, Tamil, Sioux, Morse Code and Martian. *Protext* 3 will be out on the PCW and they'll finally have put in the ability to produce sensible ASCII files. My *Protext* book will have sold another copy. Our builder will finish the work in the kitchen. England will have won the 1998 World Cup. And PCWs will regularly appear on TV on *The Antiques Roadshow*.

PCW RHYMING SLANG

First in a series of one. Apologies to *Private Eye.*

Technical support	Cancel or abort
Dot matrix print	Have to squint
Flight sim	Pretty grim
Posting a disk	Too much of a risk
Adventure game	Boring and lame
Comms freak	Can't speak
Amstrad PR	Who the hell do they think they are
Alan Sugar	Hard-nosed chap

THAT'S IT – ED.

Well, all good things must come to an end, and even mediocre ones too. This is the last PCW column. Thanks to all the people who've written, phoned and thrown messages tied onto bricks through my window. PCW owners are a varied and interesting bunch and I've made a lot of friends through the machine. In reply to a couple of queries, former columnist Basil Pigg is alive and well and looking after his interests in market garden produce. I'm half dead and writing for *Classic CD*, a sister publication to *New Computer Express* on the far more interesting topic of classical music – and yes, we're using PCWs to put it together.

So it's [SHIFT], [EXTRA], [EXIT] from me; dear readers, best of luck with your novels and best wishes to both of you.

Rob Ainsley

MSX

FOND FAREWELL

This is a very sad day for me, because this is the last time that you will see the MSX column in *Express*. The publisher has decided to axe all the minor format columns, and unfortunately this includes our MSX column. Due to the short notice of this decision, I therefore have to squeeze as much info into this last edition as possible. It also means that there will not be room for some items of news, but never mind, let's mention as much as possible.

Firstly some software news: Zeppelin Software has just released a game called *Spaghetti Western* on the MSX format, price £2.99, and the Addictive game *Football Manager World Cup Edition* should be available as you read this. Better late than never, eh. Also watch out for more titles from Blade Software, with games like *Lords Of Chaos* and others due out towards the end of the year.

I have briefly tried out the two pieces of software that I mentioned in last weeks column, namely the CAD version 4 that MSX Link are distributing, and also the FM-Pac music cartridge that *Network* magazine has lent me.

CAD

The CAD program, priced at only £5, is a really excellent graphics program that not only allows you to draw your own pictures, but also contains several digitised pictures that can be loaded in and manipulated. There are animation sequences that can be loaded and run, and the whole program, which is menu-driven and mouse compatible, is highly sophisticated. Although some of the operations that the program performs are sometimes a little slow, overall the package is fantastic value, and is a must for any MSX 2 owner. There is one picture in the package called *King Tut*, which is the digitised picture of Tuten Khamoun, and believe me it is as good as any I have seen on certain 16-bit computers. If you wish to purchase a copy of CAD, phone MSX Link on: 0775 711108. I'm impressed and I am sure you will be.

The second item, the *FM-Pac*, is a cartridge based utility that plugs into the port of an MSX1 or 2, and allows you to produce sounds and music over nine channels simultaneously. Thus it gives you the same sound capabilities as an MSX 2 Plus. The *FM-Pac* is unfortunately unavailable in the UK at present, but hopes are high that more will be imported soon. Look for details in the news pages of *Express*, as this is where you will need to look for MSX info now.

GENIUS FOR SALE

Capri Marketing, one of the top MSX software stockists, has decided that, as this is the last MSX column in *Express*, it would like to do a special offer to readers of this column.

Therefore, if you quote *Express* with your order, you can purchase any of the Leisure Genius titles for only £6.99. These are of course *Scrabble*, *Cluedo*, and *Monopoly*. Tel: 0628 891101.

A big thanks to all who have supported MSX in the past, including MSX Link, MSX Central and *Network* magazine. You have all been most helpful.

Keith Neal

CPC

SEND IN THE TANKS!

Just in case you need a change from alien-blasting, car-crashing and ninja-booting, I thought I'd tell you about the latest release from Cases Computer Simulations – *Battle of the Bulge*.

The Battle of the Bulge, for all those who weren't there, was the last major European campaign of World War II. It represented Hitler's last desperate attempt to burst through the advancing Allied forces and, in the process, revitalise the ailing morale of the German army. It didn't work.

Having said that, the German campaign, if it had succeeded, would have gone down in the history books as one of the most inspired pieces of military thinking this century. In mid-December 1944, German Panzers drove deep into the Ardennes, while commandos dressed as American officers parachuted into the midst of their forces to redirect and generally confuse the enemy… *(That's enough history – Ed.)*

Of course, as with all wargames, the historical facts are one thing – what happens when you play out the scenario is another. Here is your chance to rewrite the history books, to pit your own wits against either the German or Allied forces – to find out how the war would have gone if you'd been in charge.

Cases' *Battle of the Bulge* lets you play either the good guys or the bad guys. Your opponent can either be another warmongering psycho or the computer. You can also change the weather conditions, delay Patton's relief army and otherwise mess around with history. The game has only an 'easy' and a 'hard' level, but throw in all the other variations you can specify at the start, and you can tailor the battle almost at will.

So far so good. Unfortunately, to gamers used to the fast, slick graphics of the latest arcade conversion, *Battle of the Bulge* will look pretty grim. Your total map area is some 70 miles square, and there's no overall map to display the disposition of your forces. Consequently, the game involves a lot of scrolling around, and this is both slow and jerky. Your units are identified by symbols representing tanks, artillery etc and you give orders by first selecting the unit, then your order.

When it comes to the battles proper, you don't get to see any pyrotechnics at all. Instead, you must simply examine all your units afterwards to see how much damage they've sustained. If they're severely shot up they'll retreat automatically.

The game is fine in itself, but the execution leaves a lot to be desired. The map of the terrain is crude and simplistic, and each turn requires lots of tedious keystrokes.

However, once you settle down to realising you're playing a strategic simulation rather than a glitzy arcade blast, it's not a bad game. Price? Ah, well, it's a slightly sticky £12.95 on cassette, but the standard £14.95 on disk.

WAVE'S WINNERS

Good news for anyone pondering the purchase of the Amsoft *Supercalc* spreadsheet, but put off by the price: Wave is now selling the program for £24.95, plus £3.45 P&P. Not bad, eh? In addition, Wave has got hold of a large number of FD-1 drives (the ones without the interface) and is selling them off at the absurd price of £49.95! Call Wave on 0229 870000 for all the details.

CONSOLE WORRIES

F Sheikh, of Redbridge, Essex, is worried about the new Amstrad console:

"I recently heard that the new Amstrad console was to be released very soon and I received this news with mixed feelings.

"Firstly, the good points. The console will bring a lot of much-needed attention to the CPC scene, which I feel has been neglected in recent times. This will hopefully produce more games and reviews for Amstrads – especially the latter, as in many multi-format magazines there are usually only one or two reviews.

"But there may be a very serious side-effect to this. The 464, 664 and 6128 owners may be in danger of being completely forgotten as everyone goes mad about the console. Companies may churn out games for the cartridge-based users, but eventually phase out the older generation.

"This may not turn out to be the case – software companies may wait to see how sales of the console go before producing games – but I still wait in anxiety for the release.

Well, for a start, you won't have to wait much longer. All being well, the new console and Pluses will be in the shops for early October. But as for this spelling the death-knell for the old machines, that's another matter entirely.

For a start, cartridge games are going to cost £25-30, twice the price of existing software. That factor alone is enough to generate a new market rather than simply take over from the old one. And don't forget that the budget market has co-existed peacefully with the full-price market for ages. No, rather than seeing the current tape/disk software releases drying up, I think we're going to get an additional 'in-between' market. It's going to be some time, after all, before the majority of software producers can be convinced to move into cartridge software, if ever.

And even the 'old' CPC hardware turns in a pretty creditable games playing performance. When you look at the likes of *Laser Squad* and *E-Motion*, it's hard to imagine those being much improved in an Amstrad console version.

The most likely eventuality is that we'll see publishers choosing whether to release a particular game in cartridge or tape/disk form.

Major film tie-ins and arcade licences will probably end up on the console, while original product is likely to appear on tape/disk.

Rod Lawton

POKE PARADISE

OK, how's about this for a tape-poking treat then. Just cop a load of these multifacers from Anthony Jones, David Aird, Stephen Troup and Garret Flynn:

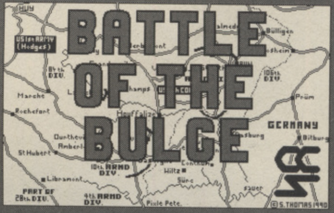
NAME	ADDRESS	POKE	EFFECT
Savage part 1 (t)	033C	FF	255 lives
part 2 (t)	2611	00	256 lives
part 3 (t)	0C3B	00	256 lives
Wriggler (t)	8018	00	256 lives
Bigfoot (t)	1016	A7	Inf. lives
Subterranean Stryker (t)	7D36	A7	Inf. lives
Goonies (t)	465F	FF	255 lives
Cholo (t)	8316	A7	Invulnerability
Krakout (t)	7B3A	00	Inf. lives
Ball Crazy (t)	1C6F	A7	Inf. lives
Metal Army (t)	7362	00	Inf. lives
Dan Dare (t)	7C58	C9	Inf. lives
Ultima Ratio (t)	31D9	00	Inf. lives
Xcel (t)	33A4	00	Inf. lives
Mask (t)	8B16	3A	Inf. damage
Strider (t)	2BDE	A7	Inf. energy
	2BE9	A7	Inf. lives
Thunderbirds (t)	5E48	A7	Level 1 time
	5FFC	A7	Level 2 time
	57C6	A7	Level 3 time
	5746	A7	Level 4 time
Indiana Jones Last Crusade (t)	2249	A7	Inf. Whips
	31A7	A7	Inf. lives
Rolling Thunder (t)	4720	00	Inf. lives
	4740	00	Inf. energy
Rastan (t)	2353	00	Inf. lives
Garfield (t)	1EAC	00	Don't fall asleep
Druid (t)	4566	00	Inf energy

• *The Beast is back...*

Amiga 8

• *Beware of low flying dragons...*

ST 10
Spectrum 12
SAM Coupé 12
PCW 12
MSX 12



• *Whatever you do, don't mention the CPC.*

CPC 13
QL 14
BBC 14
Archimedes 14
PC 16

BBC

THE END IS NIGH

All good things must come to an end and so, alas, this is the very last BBC column. I've enjoyed writing it, and I hope my readers have enjoyed it too. No regrets though as times change and we must all move with those times.

You must all be asking if this means the end of Beeb coverage by *Express*, but the answer is no. Beeb events and news items will still be covered in the relevant parts of the magazine.

You may even see my name from time to time, as the editor had requested that I continue to contribute items whenever something interesting comes up. In the home market that now means rarely or never, but a different set of conditions prevails in the education market, where new software packages for the Beeb are still a common event.

UPGRADING

For most Beeb owners other than schools, the questions that must be asked at some time are:-

- Do I upgrade?
- What do I upgrade to?
- When do I upgrade?

The short answers are:

- Yes
- The Archimedes
- Wait a little

The reasons behind my recommendations are as follows:

The time to upgrade is when newer machines offer software that is functionally superior to, as well as being easier to use, than your current choices. That time has now finally arrived.

The Archimedes provides a good degree of backward compatibility through its 165Host and 165Tube applications, and the BASIC 5 used by the machine is a direct descendant of BBC BASIC.

The Arc is fast, expandable, and capable of running PC software through it's emulator. It may be worth considering a PC clone or Amiga, if your preference is for business software or games respectively.

WORTH WAITING

I suggest you hold on at least a couple of months, however, because I think Acorn may just be launching a new, cheaper Archimedes machine in time for Christmas, and there may be some good bundles on offer.

Credit may be difficult to get, so watch out for companies offering zero per cent interest rates, and snatch their hand off!

STORY TIME

And finally, a tip to read a short story by my favourite author, Ray Bradbury called: *Some Live Like Lazarus.*

If you want to know why, and what it's got to do with this column and the Beeb, then you'll just have to read it. You can find it (and 19 other excellent stories) in a paperback called, *The Machineries of Joy* (Grafton Books).

Andrew Brown

QL

PCB CAD

Although a couple of CAD programs for generating printed circuit board (PCB) artwork for the QL have been around for some time, they weren't particularly capable. Now, Lear Data Systems has produced a package that, on paper at least, looks nearly as good as the very popular *Easy PC* for PC users, which I've been using for some time.

Features include a 32-inch by 32-inch drawing area, resolution down to .001inch, up to 16 layers, a virtually unlimited number of components, surface mount capability etc.

Output can be to a dot-matrix printer, a pen plotter, or a laser printer. Unfortunately, output of Gerber-compatible photo-plotter files isn't available – this is essential for high quality multi-layer boards.

At a price of £79.95 the package is excellent value for money, if it does everything it claims. Lear Data Systems is at: 6 South View Green, Bentley, Ipswich, Suffolk IP9 2DR. Tel: (0473) 310804.

QUANTA DOINGS

The Bristol sub-group will be holding a workshop in Portishead on September 30. Contact Chris Gregory on 0272 513653 for further details.

Jeremy Davis is trying to start a London sub-group. Some 168 members live in the London area, so a group should be quite viable. Contact Jeremy on: 081-863 1631 after 6pm if you are interested.

The newly formed Lancashire sub-group has held two meetings. The first attracted 11 members, and 16 turned up for the second. They meet on the first Monday of each month at the Lisieu Social Club, near Leyland, at 7pm.

The contact is Steve Sutton, 44 St. Mary's Road, Bamber Bridge, Preston PR5 6TE.

DIODE TIP

Those of you who are handy with a soldering iron might be interested in a tip from John Butterworth, mentioned in the latest issue of the group's newsletter.

He found that putting a silicon diode in series with the nominal 9V output from the power supply (reducing the voltage by around half a volt) cured a lock-up problem that was affecting his machine. Something like a 1N0004 should be suitable.

THE LAST QL COLUMN

Sadly, the powers that be have decided to discontinue the columns for the less popular machines, such as the QL, after this issue.

However, the news sections of *Express* will be publishing items of interest to QL owners. Matters of interest to QLers will also appear every few weeks in a feature about the less common machines, so you should still be hearing from me occasionally.

John Torofex

ARCHIMEDES

DESKTOP OFFICE

Inspired no doubt by the outrageously successful *Mini Office*, Minerva has come up with *Desktop Office* – word processor, database, spreadsheet, chart drawing and a comms package all in one. Functional I'd rate it.

The software has a pleasing look about it – real RISCware. *DTO Word* is a character mode word processor, (no fancy outline fonts here) with all the usual bits and bobs. If familiarity breeds content, then this should please almost everyone. When a word processor displays the embedded commands in green, you know right where you stand, don't you – the low rolling hills of *Wordwise* country.

But there are some cute touches; go to the fifth paragraph; insert the current date or time; insert the text from some other file. These help to dispel an air of 8-bitness. In capability, I'd put it some way below *First Word Plus*: no graphics and no spelling.

DTO Sheet is basic, really basic. There are just 14 functions, and that's counting addition and subtraction! The spreadsheet is 32 cells by 64, rather puny if you stack it against the likes of *Pipedream*. But on reflection, just how often do you build a model with more than about 28 columns. One for each month, two year's worth, a column for labels and a few for the totals. And when did you last use that logarithm function? Again there are nice touches – a special money format is one.

Graphing and comms are pretty fundamental stuff too, although the comms pack can interpret *ArcTerm*-style script files. Automated logging-on, e-mail collection and so on is perfectly possible.

As befits Minerva, the *DTO* database is the star. *Multistore* it ain't, but you can paint your own card layout, put in text, integer, real number or date fields up to 80 characters long and so on. Date formats are particularly flexible. You can mark cards, either manually as you browse through the data, or by searching for something in particular, just as with *Multistore* and *Flexifile*. And marked cards can be pulled out into a report.

One of the nicest features is the mailmerging. A Get Datafile command in *DTO Word* identifies the database to use, and you just name the fields you want at the right part of the letter. The integration of the five modules is strong, you can usually run at least two at a time in a 1Mb machine, and passing files to *Edit*, *Pipedream* and so on is easy.

PUZZLED EXPRESSION

Last week's news of Acorn's *Schema* spreadsheet (which, after a gestation period exceeded only by that of an elephant, has been delivered into the hands of Clares), raises but one question – what has happened to *Expression*? This was to be Acorn's 'document processor', based on *Mac-Author*.

Has this too been sold off, or just put back in the postbox marked 'not known at this address'? Can't track it down yet.

I hope that Acorn's dropping of all applications software development will mean a redoubling of effort on system software. It's ironic that Acorn is taking the opposite tack to its erstwhile role-model, Apple. It has just gone back on an earlier decision to float off Claris, the equivalent of Acornsoft. Claris has been hoicked back, reportedly so that Apple can make sure that there is at least some software ready to use all the whizzo new features of System Seven, the impending new Mac operating system. New features like outline fonts, sigh, communication between applications, yawn, secure multi-tasking... zzz. They make it sound all so new.

Wholly monochrome palette3s

Files which define the colours of the screen or of a sprite, are real easy to create. The palette utility is the first desktop toy that a novice Arc owner fiddles with. Most end up returning the colours to normal in the end, because the default set is fairly well chosen. But that palette editor causes untold frustration: if you save the screen (see last week's *Express*) to disk as a sprite, then try to print out with *Paint*, you'll see the problem. You just can't get rid of those embarassing stains. All the white on screen prints as a pale shade of grey. Confusing, huh? Think of a normal palette file, eight shades from black to white. Brightness can vary from zero to 255, that's 256 levels. And 256 divided by 8 is 32. So black is zero, the darkest grey is 32, then next one is 64... and white is 224. Er, perhaps not.

A brightness of 224 really is white if you can only print eight shades. But the printer drivers cope with 64 shades of grey, and 224 is some way down the list from pure white. In fact, the default palette white is 240, but the same applies.

Acorn says that each half of every brightness byte in a palette file should be set to the same value (in hexadecimal). So black stays at zero, the first grey becomes 34 (&22 in hex), the next is 68 (&44)... and white is 238 (&EE in hex). Closer, but still no cigar. You can't build a nice, neat, linear scale from zero to 255 that way. And the palette utility doesn't follow the rules anyway. The only correct way to do it is to divide 255 by 7 (for eight shades) or by 15 (for a wholly monochrome palette). So the palette values are 0, 36, 73, 109, 146, 182, 219 and 255 for eight shades. I never had this problem with my ZX81.

The solution is easy. Create a modified palette file and add it to any sprites that print in grey – you can add a new palette to a sprite by dragging the palette file into *Paint's* editing window.

You can use edit to modify the default palette file – you'll spot the palette entries as they are eight sets of three identical characters in the first half of the file. Replace each group of three with three 255s, three 219s and so on. Remember, to enter a 219 character (whatever that is), you can just hold down the [Alt] key and type 219 on the numeric keypad.

Ken Coumarin

★ POCKET SIZED ★ PC-COMPATIBLE ★ PERSONAL ORGANISER ★

ATARI Portfolio

THE PC IN YOUR POCKET

The new Portfolio from Atari is the world's first pocket-sized electronic organiser that is also a powerful PC compatible computer, with a full QWERTY keyboard and scrolling 80×25 character display.

Portfolio includes everything you would expect from an electronic organiser - an address and telephone book, time manager, diary and sophisticated calculator.

Portfolio also includes several functions that you would not expect - a spreadsheet for your personal budget and expense records, as well as a text processor for typing memos and letters.

And, because Atari's Portfolio is PC compatible, it can communicate with your desktop PC at home, or in the office. You can transfer files from one to the other, to enable you to update your reports and figures with the Portfolio while you are on the move.

FOR ONLY £249 INC VAT

SPECIFICATION

- ★ ***Processor:*** Intel 80C88 at 4.9152Mhz.
- ★ ***Operating System:*** Compatible with MS-DOS 2.11.
- ★ ***Internal ROM:*** 256K containing BIOS, operating system and applications suite.
- ★ ***RAM:*** 128K with an internal RAM disk, configurable from 8K. Externally expandable to 640K RAM.
- ★ ***Keyboard:*** 63 keys, QWERTY, IBM PC BIOS compatible. Buried numeric pad and function keys. Optional key click.
- ★ ***Character Set:*** Extended IBM ASCII (255 characters).
- ★ ***Mass storage:*** credit card sized memory cards (32K or 64K or 128K RAM).
- ★ ***Display:*** Graphics LCD, supertwist technology, MDA compatible, 40 columns x 8 lines, 240 x 64 pixels (with the option to window a full 80 x 25 character display). Keyboard controlled contrast.
- ★ ***Peripherals:*** 60 pin expansion BUS to take serial and parallel ports and memory expansion units.
- ★ ***Size:*** 8" x 4" x 1" (200mm x 105mm x 29mm).
- ★ ***Weight:*** 495 grammes (with batteries).
- ★ ***Applications:*** calendar and diary, address and phone book, Lotus 1-2-3 compatible spreadsheet, text processor, communications software.

COMING SOON!

In addition to the excellent software built-in to the Portfolio Free of Charge (see right), other software and peripheral products, such as the sophisticated Pocket Finance package and serial/centronics interfaces are available. And it doesn't stop there. Many manufacturers have recognised the potential of the Portfolio and have already started to design new peripherals and software. Products currently under development include: Serial interface with built in mini modem, Apple Macintosh interface, business, utility and programming software plus a range of adventure and battle strategy games. For further free details on the Portfolio range, fill in the coupon below and return it to Silica Systems now.

5 BUILT-IN APPLICATIONS TO GET YOU ORGANISED!

To get you started, Portfolio comes with a suite of five useful functions built-in, all accessible from a simple menu display.

TIME MANAGER

More than just an electronic diary, the Portfolio Time Manager enables you to plan your appointments via a comprehensive calendar and diary. It can even be programmed to sound an audible alarm at specific times to remind you of important appointments.

CALCULATOR

Your Portfolio will be invaluable in the office or at home as a powerful pocket calculator. It has a full range of functions, including factorial, power and root calculations, all with multi display formats and memories.

ADDRESS BOOK & DIALLER

Portfolio has a complete address book facility that allows you to store hundreds of addresses and phone numbers. And, at the touch of a button, you can retrieve any one of them, or search for a specific grouping, such as "all Italian restaurants". And, when you are ready to book your table, hold your Portfolio to your telephone mouthpiece and use its special built-in tone dialler to dial the number for you.

TEXT PROCESSOR

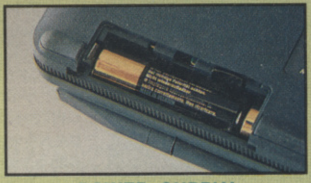
The Portfolio's built-in text processor program includes word wrap, line and column count, string search, in fact most of the functions you would find in a word processor. It handles printer and word processor control codes and allows easy transfer of files between Portfolio and your desktop PC.

SPREADSHEET

For real calculating power, Portfolio has a Lotus 1-2-3 compatible spreadsheet built-in. It has 127 columns x 225 rows and reads/writes Lotus V1.0 and V2.01 files, so you can transfer data to and from Lotus 1-2-3 on your desktop PC. The Portfolio's 256K ROM includes MS-DOS and PC BIOS compatible systems software.

MEMORY CARDS

Portfolio can store and retrieve data and programs from its own RAM, or from small credit card size memory cards, that slot into its built-in card drive. The cards are available in three sizes, 32K, 64K and 128K, so you can carry a library of data in your pocket. The card drive also accepts ROM cards, which can contain commercial or custom software.



POWER SUPPLY

Portfolio is powered by three AA batteries which will run for up to six weeks with normal use, or from the mains using an adaptor. All the peripherals take their power from the Portfolio, so no extra batteries or adaptors are required. A 'battery-low' warning and memory back-up ensure that information is not lost when the batteries are changed.

INTERFACES & PERIPHERALS

Portfolio can communicate with other computers and supports a growing range of peripherals via a built-in 60 pin bus connector. Peripherals available include serial and parallel interfaces and memory expanders (to 640K). You can also add a card drive to your desktop PC, to enable it to read/write to Portfolio's cards.

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Before you decide when to buy your new Atari Portfolio, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Portfolio, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new Portfolio products? At Silica Systems, we ensure that you will have nothing to worry about. Silica Systems is a new division of Silica Shop, the UK's leading Atari specialists. This new division has been established to provide a service to the more serious home user, as well as to business and education purchasers. Silica have been established for over 12 years, and have an annual turnover of £13 million. With our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now, for our latest Free literature and begin to experience the "Silica Systems Service".

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E&OE - Advertised prices and specifications may change - please return the coupon for the latest information.

PC

NEW DOS ON THE BLOCK

Microsoft in the States is beginning to talk about the features that will be seen in a new version of MS-DOS which is due out soon. For some reason it is denying that it will be called DOS 5 – perhaps the trauma it sufered over the bugs in DOS 4 has put it off making the jump to a new number again so soon.

High on the features list is support for memory beyond the 640K, using the method used by Windows 3 - called the *Virtual Control Program Interface*.

For those of without a 386, an improved version of BACKUP is promised, as is a better text editor. And new and more powerful wildcards will make file selection easier.

Microsoft is keeping tight lipped about a release date for the new DOS, but keep your eyes peeled around Christmas time.

Microsoft will have to get its act together to better Digital Research's DR-DOS 5.0, which we mentioned last week.

UP THE GARDEN PATH

So you have just quit out of a session using Microsoft *Works*, you find yourself in the directory C:/works/files/letters and you want to format a disk. You type FORMAT and DOS helpfully responds: 'Bad command or file not found'.

Now you can either remember that the FORMAT.EXE is in the MS-DOS directory and type:

```
C:/MS-DOS/FORMAT /4 /s
```

or whatever; or you can set up DOS to always look in the MS-DOS directory when you give it a command. The command you use to do this is called PATH.

To use PATH you type the command followed by a list of directories separated by semicolons. If DOS can't find the program you tried to run in the current directory which you are in, it will then check through the directories in the PATH list, in order.

A typical PATH statement might be:

```
PATH c:/;c:/DOS;c:/win;c:/works
```

After you issue this command DOS will look in the following directories in order:

- The current directory
- The root directory (c:/)
- /DOS
- /WIN
- /WORKS

If it can't find the program in any of these it will finally give the 'File not found' error,

Judicious use of the PATH command can save a lot of typing at the command line, and it is a good idea to include a PATH statement with your most commonly used directories in the autoexec.bat file. Do this with a text editor or word processor – next week we'll take a look at setting up the system files in more detail.

If you want to check what directories are in the currently active PATH command, typing PATH on its own will print a list.

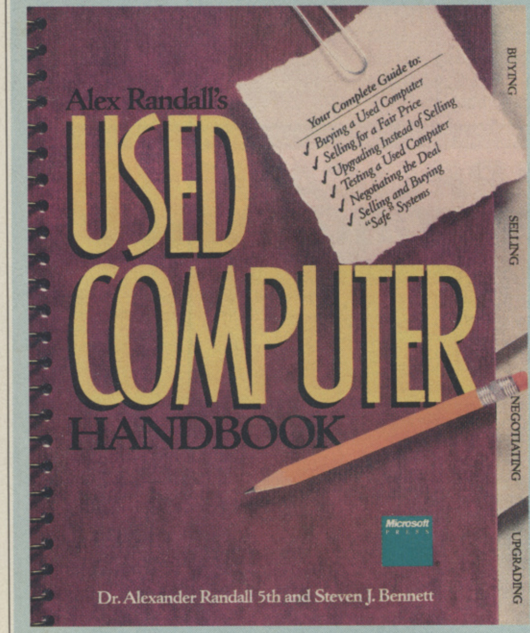
WE WANT YOUR SOFTWARE

Express is always interested in looking at new products, be they hardware or software, shareware or costing £100s of pounds. The only criterion for inclusion in this column is that they should be of interest to the readers – and your product is dead interesting, isn't it?

So if you fancy a mention in these pages, pack up your product and send it to: Stuart Anderton, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.

Stuart Anderton

BUYER BEWARE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• Selling or buying a computer: get some advice.

The cheapest way of getting hold of a PC isn't to scour the bargains from the box shifters, but to look to the reader classified ads and get hold of a machine second-hand.

Unfortunately this path is full of pitfalls for the uninitiated, and if you are not careful you can end up with a lemon. That's where a new book from Microsoft Press comes in.

Alex Randall's Used Computer Handbook is 200 pages of buying hints – the computing equivalent of kicking the tyres and poking a finger at the spark plugs. Alex Randall is a well-known figure in the States, where he runs a used computer exchange and price information network, and knows his stuff when it comes to choosing a used PC.

As well as looking at the more obvious buying hints – "Turn the keyboard upside down and shake it. Do any keys fall off? They shouldn't" – Randall is also full of advice about negotiating a deal and establishing a reasonable going rate for a machine.

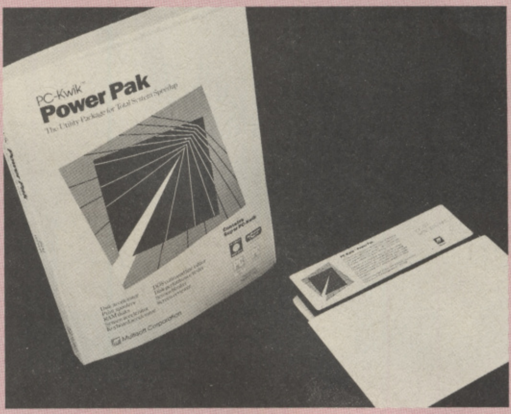
Also covered is selling a machine – in fact much of the advice works both ways.

To provide a balanced approach, Randall considers the advantages and disadvantages of upgrading your existing computer over getting a second-hand one.

The book is well written, but very American, and that's its main drawback. A lot of the information in the book – dealer addresses and phone numbers and the like – is specific to the US.

This book is worth a look if you are thinking of buying second-hand. It costs £12.95 from Microsoft Press (ISBN 1-55615-267-1).

SPEED KING



• Get your PC going faster with the Power Pak.

We all want our computers to go faster. Even though most of us don't actually need more speed for our word processing, a beefier Norton rating brings a glow of pride to a PC owner's face.

Unfortunately more speed usually means better hardware and that invokes the twin evils of computing – screwdrivers and cheque books.

But if you can't face shelling out for that 386 just yet, there is a way of increasing your machine's poke without adding so much as an accelerated RAM chip.

The *PC-Kwik Power Pak* is a 100 per cent software package which claims to increase the speed of your PC by as much as four times. It consists of a set of utilities which speed up various parts of your system, such as hard disk access, screen redrawing and the keyboard.

The core of the *Power Pak* is the hard disk cache. What this does is to store the most recent data you have read from the disk in RAM, on the basis that if you've looked at it once the chances are you'll want to look at it again. Because of the way most programs work this is a pretty good assumption and the data your program needs can be found in the RAM as often as 70 or 80 per cent of the time. This speeds things up because the average access time of a hard disk is 40ms (1/25 of a second) while RAM has an access time of around 100ns (1/10,000,000 of a second). You see the advantage.

The disadvantage is that the cache needs RAM to store the data in. And every byte used by the cache is a byte your programs can't touch. So while a disk cache can help with a very-disk intensive program, most of the time you don't want it cluttering up your precious 640K. If you have more than 640K however you're laughing. Most machines these days come with a megabyte of memory and, while programs can't use the extra 384K, the cache can.

What sort of performance increase can you expect? Well that rather depends on the kind of work you are doing and how much memory you can spare for the cache, but the *Power Pak* upped the Norton Disk Index of my machine from 1.7 to 6.8, and that's a difference you notice while working.

The rest of the *Power Pak* consists of a number of smaller utilities. A print spooler saves you waiting for the printer to finish before carrying on working. A RAM disk lets you store files in memory rather than on disk – be careful with these, RAM disks are fast but it's easy to forget that hitting Save doesn't keep a permanent copy of your files unless you copy them from the RAM disk to the hard disk. A keyboard accelerator speeds up the repeat rate, letting you zip around spreadsheets faster. Finally, a screen accelerator speeds up text-only screen drawing by replacing the BIOS routines with its own optimised ones. The main effect of this seems to be to make the directory listing fly up even faster so you have even less chance of reading it before it goes off the top of the screen. (Yes I know how to stop it, but do you remember to add the |more the first time?)

So far I haven't mentioned anything which makes the *Power Pak* more than a compilation of utilities, equivalents of which are available from the public domain for the price of a disk. Well the *Power Pak* is well put together and has a good manual, but the thing which really sets it apart is the integrated nature of the utilities.

The disk cache, RAM disk and print-spooler all share the same area of memory and swap it between them as required. So any free memory not used by RAM disk files is temporarily used as disk cache space until you save a file to it. This is ingenious and makes the RAM disk a practical proposition in a machine without vast amounts of memory.

The PC-Kwik *Power Pak* is well worth a look if your machine is feeling annoyingly sluggish. It costs £113.85, from P&P on 0706 217744.

BEST

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THE SHOPPING EXPRESS GUIDE TO THE TOP WORD PROCESSORS

The most vital piece of computer software for most serious users is the word processor – many use their micro for nothing else. Here is the Express verdict on the best you can find for every machine

The most popular use for the micro is as a word processor. Its uses are many and everyone can benefit from it at one time or another.

Whether you intend to write to the *Times* as 'Angry of Pinner', write to thank Aunt Elspeth for the vellum bound copy of *Pilgrim's Progress* or send Jeffrey Archer running for the smelling salts with your latest thriller, a word processor is for you.

First things first, what is a word processor? It is an applications program that runs on your micro allowing you to use it as an intelligent typewriter. You can see the results of your typing before you print it and can correct mistakes, manipulate text and format documents on screen.

There's no need to print your document there and then, as it can be saved to cassette or disk and retrieved later for further additions, editing or printing.

The beauty of word processing is that you can set up and save commonly used layouts and letters and load them when needed to avoid repetitive typing.

Most word processors allow you to change margins and reformat text and any number of tab settings can be incorporated.

Common series of commands or keystrokes can be incorporated in macros in most word processors, allowing multiple commands at a single keypress. This is also useful for saving strings of text. Commonly used phrases, addresses and phone numbers can be assigned to a macro.

The more comprehensive (for which read 'more expensive') word processors generally have spelling checkers, mail merge facilities, word counters, and some of the better ones can even display italics, bold type face and different text sizes on the screen.

The ability to present the document on screen as it will appear on paper is known as WYSIWYG (What You See Is What You Get) and this feature is becoming 'standard' on new software.

To combine a letter with names and addresses in a database is called mail-merge and is especially useful to businesses who wish to send the same letter to different clients, or perhaps a student wanting to tailor a curriculum vitae to suit prospective employers.

Page numbering and titling can be handled by most programs, and some even allow footnotes, bibliographies and indexing to be incorporated.

As word processing becomes more advanced, features such as importing graphics, working on several documents at once and calling lists from databases increase the efficiency of a simple typist or a large multinational. We all need to write at some time, and the word-processor takes some of the drudgery out of the task.

This is the Express guide to the word processors available for each machine with a brief description of each. Prices shown include VAT.

PC WORD PROCESSORS

● KWORD 2

Kuma
£39.95

Budget-priced word processor with on-screen features such as bold and italic. Runs within GEM and can have up to four documents open in on-screen windows simultaneously.
0734 844335

● MANUSCRIPT 2.01

Lotus
£454.25

The heavyweight for the technical author. Not a general purpose WP. In a sense, it is more of a giant outline processor for imposing clear and flexible structures on complex documents. Handles cross-referencing, equation definition and tables. Imports Freelance and Graphwriter graphics and allows page previewing. Requires hard disk.
0753 32443

● MULTIMATE ADVANTAGE 2

Ashton Tate
£450

Primarily a secretarial package. Included are sophisticated mail merge functions, a card index database, a thesaurus and a 110,000- word spelling checker. Macros and line drawing possible. Choice of keyboard or menu control. Hard disk recommended.
0628 33123

● MULTIWRITER 2

Newstar
£114.95

Regarded as a relatively modestly priced WordStar clone, Multiwriter 2 offers macro learning and language facilities and can import WordStar, WordPerfect and Multimate files. Has mail merge, word counter and spelling checker.
0245 265017

● NEW WORD 2.18

Newstar
£114.95

Highly customisable and well respected WordStar-style WP with powerful mail merge, plus spelling checker and word counter. Uses the same keystrokes that WordStar enthusiasts know and love.
0245 265017

● OLITEXT PLUS 2.0

Olivetti
£355

A fast word processor with math and macro functions. Contains a pull-down notepad and calculator. WYSIWYG.
081-785 6666

● CELEBRITY

Software Paradise
£80.50

An unusually well implemented word processor for the beginner. Uncompromising attempt at a comprehensive suite of programs with a thesaurus, spell checker and the ability to open four text windows.
0222 887521

● PC WRITE 3.0

Sagesoft
£114.95

Footnotes, contents, mailmerge, multi-column, and other features make this under a hundred good value. Runs a little slow at times but is a good middle of the road program.
091 213155

● PROTEXT

Arnor
£100

Widely respected, not least among journalists, Protext stands out for its abilities in text and file handling. Built-in mail merge facilities are so powerful that it forms programs of its own. Choice of prompted word commands or menu system. Spelling checker; editable printer drivers.
0733 68909

● SPRINT 1.01

Borland
£172.50

An unusual and innovative package. Has drawbacks, including not being WYSIWYG, but offers emulations of common WP user interfaces (including WordPerfect, WordStar and Microsoft Word) plus full programming language for writing your own. Allows up to six windows on 24 documents. Saves changes while you type!
0734 320022

● SUPERWRITER 1.03

Computer Associates
£224

A fairly simple to use well functioned word processor with mail merge and spell checking facilities.
0753 77733

● TASWORD PC 1.17

Tasman
£49.95

Dead simple and cheap enough but damn slow. A domestic solution to a commercial problem.
0532 438301

➤

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0453 753944

● WORD 5.0

Microsoft
£395

A very good, sophisticated heavyweight word processor with excellent outliner.plus style sheets, maths, macros, and up to eight windows on the screen at any one time.
0734 500741

● WORDPERFECT 5.1

Word Perfect UK
£494.50

Not cheap, but this top-selling WP is generally regarded as superb. Lacks outlining, but among numerous attractive features are thtree-level undo facility, graphics importing and editing, macro facilities and on-screen columns.OS/2 version costs £575.
0932 850500

● WORDSTAR PROFESSIONAL 5

Micropro
£399

Years ago it became the 'standard word processor'. It has many features, and 'WordStar' keystrokes are the standard by which all other packages are judged. Version 5 offers an improved interface. It is a pity that such a popular package is still seriously flawed.
081-643 8666

● WRITER 1295

Logotron
£12.95

The low price of this budget software more than makes up for the snail's pace of its spelling checker.
071-359 3594

AMIGA WORD PROCESSORS

● PROTEXT

Arnor
£99.95

Protext is an easy to learn word processor with powerful text handling and file manipulation. The mail merge facilities are so comprehensive that you can look on the stored commands as a programming language for mail housekeeping. A good spelling checker and available on many other machines.
0733 68909.

● KIND WORDS 2

Amiga Centre Scotland
£49.95

Seemingly good value word processor for under fifty quid. Spell checker included and also the ability to import graphics. The current version includes A dictionary, thesaurus and various fonts. If you intend to upgrade to DTP, it's worth seriously considering contacting HB Marketing on 0753 686000 who include Kind Words in their 'Publisher's Choice' DTP package at under £100.
031-557 4242

● SCRIBBLE (PLATINUM EDITION)

HB Marketing
£49.95

The updated and upgraded version of the already popular *Scribble* . Very simple to use and with a spelling checker and mail merge facility. Text can be reformatted as you type. No graphic functions but very simple to use.
0753 686000

● WORDPERFECT

WordPerfect UK
£293.25

WordPerfect is a full featured heavyweight word processor with a price to match. This almost £300 package includes over 500 pages of manual and a huge dictionary /spelling checker/thesaurus. A Command line interpreter can be called from within the program simplifying the running of multiple environments.
0932 850500

ST WORD PROCESSORS

● FIRST WORD PLUS 3

Electric Distribution
£79.95

First Word comes bundled with the ST and for that reason, First Word Plus makes a logical upgrade with its ability to handle graphics and capture screens directly in the Degas format. Many good features such as column printing, mail merge, and a spelling checker, but the operation can be tedious and there's no index in the manual.
0480 496789

● WORD WRITER 1.0

Electric Distribution.
£49.95

What you see is what you get (WYSIWYG) The spelling, merging and thesaurus of this program are well integrated and all in all the program is easy to use. There are user definable routines and an intuitive typist will soon come to grips with it. There is no graphic importation facility and combining layouts in the same document is awkward.
0480 496789

● PROTEXT

Arnor
£99.95

Protext turns up on all of the popular machines and for sheer ability at handling text and files, takes a lot of beating. The same things that apply to the Amiga version, also apply to the ST Fully keyboard driven, ST Protext kicks the GEM environment out in favour of its own.
0773 68909

➤

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● THAT'S WRITE

Cavendish
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This popular program puts the emphasis on the printed word and produces excellent hard copy. You can design a font, grab a screen or utilise the auto-indexing feature. There are many unique features but the manual is quirky and the WYSIWYG display has some weird fonts on screen.
071-323 4761

● WORDUP

HB Marketing
£59.95

More a document processor than a word processor, Wordup is the first step toward DTP having features such as graphics, text flow, graphic import, type sizes and styles. Ideal for producing newsletters and impressive documents. Unfortunately, there is no way of importing other fonts and a spelling checker is noticeable by its absence
0753 686000

PCW WORD PROCESSORS

● LOCOSCRIPT 2

Locomotive Software
£25 including p&p

LocoScript 1 is bundled with the PCW8256 and 8512. LocoScript 2 comes free with the PCW 9512. Therefore the obvious upgrade for all PCW 8256 and 8512 owners who want a little more speed and support for foreign character sets is LocoScript 2. They still haven't remembered the word counter and it still works at the speed of a snail in reverse but some people cut their teeth on Locoscript and will probably like it.

Strange that Locoscript 2, with all its fonts and foreign symbols and graphics abilities, is bundled with a computer with a daisywheel printer that has no need or use for it.
0306 740606

● PROTEXT

Arnor
£59.95

Protext PCW works under CP/M and is mobile between PCW and CPC computers (The same disk works in both, honest!). A stalwart user of Locoscript may grumble for a few seconds but the lightning fast file handling will soon produce another convert. Mail merging, column printing, two file editing and with an in-built spell checker. Using the M: drive it becomes faster than a speeding bullet.

If you own a PCW and you haven't got this program, you are wasting your machine's potential.
0733 68909

● MINI OFfiCE

Database
£30.00

Mini Office is a five-piece applications package of which the word processor is just one part. If you only type the occasional letter, want to store the family finances in a spreadsheet and catalogue your records in a database, buy it. If you have serious word processing in mind, it is probably not your best choice.
0625 878888 or 051-357 2961

● NEWWORD

Newtar
£70

A WordStar clone for people who were trained on that standard word processor and are unwilling to change. Flexible and powerful, but probably best left to those addicted to the original it is based on.
0245 265017

CPC WORD PROCESSORS

● PROTEXT

Arnor
£19.95 Tape
£26.95 Disk
£39.95 Rom

It is worth buying a Romboard and Protext, for the sheer enjoyment of instant loading non-memory-resident software. A couple of keystrokes and the program's there. No waiting around while tapes chunder or disks whirr. File size is limited to 22K (disk version) or 38K (ROM Version) but 38K is plenty long for a chapter of a book, so it isn't a real restriction .A straw poll of the journalists on Amstrad Action revealed that they were all using Protext on ROM. Enough said.
0733 68909

● MINI OFFICE 2

£14.95 Tape
£19.95 Disk

Part of the five-piece applications suite, the word processor is OK for the occasional letter but not really a contender for the hard work stakes.Bundled with database, spreadsheet, graphics and comms, it is very good value for fifteen quid, but only for occasional use.
0625 878888

● TASWORD

Tasman
£19.95 Tape
£24.95 Disk

Different versions for the 464, 664, and 6128 use the machine's features to the best advantage. The disk versions include a mail merger, and printer control is easy. An easy to drive program with a slightly slow text-handling ability but nonetheless, excellent value. A separate menu customises the program to run to your specification.
0532 438301

● BRUNWORD

Brunning Software
£30 6128 disk
£25 464 disk

A word processor, spelling checker and card filer that work in 40, 80, and 128 column modes. This excellent program is easy to learn, good value and just sneaks past Tasword as second in the CPC stakes. This one would be ideal for a small club or society who wanted to update their membership using a simple data filing system.

➤

C64 WORD PROCESSORS

● EASY SCRIPT

£50
Mail Order Only

It's a good all round word processor that's no longer in production. Mail order houses are your best bet to find it. It only works in 40 column mode but has many features and is easy to drive. Good Value.

● PAPERCLIP

£50
Mail Order Only

This is reckoned to be the best C64 word processor around. It can work in 40 or 80 column mode, has a spelling checker and the facility to write your own macros. Two document working is supported and the only thing going against it is its lack of suppliers. Difficult to find but worth the effort.

SPECTRUM WPs

● TASWORD

Tasman Software
£13.95 Plus 2
£19.95 Plus 3

The only contender in the Spectrum market, with different versions supporting each machine. It runs very slowly at times, but puts the Spectrum firmly on the word processing map and has options to customise and speed up the routines. Plenty of help on screen and mail merging as well.
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An early offering for the Beeb that works in 40 column mode. 80 columns can be seen in preview mode. Very quick and intuitive.Plenty of help in the manual and a facility for embedded print codes, but be prepared to work at it. Macros are supported, and it is also available in the instant-load ROM format.
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Acornsoft

Ported from the ST, this program does everything that the ST version does and more beside. Printers are well supported, the spelling checker is quick and functional and there is a facility to import graphics
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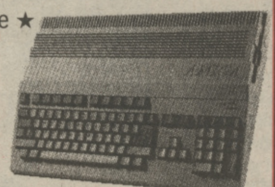

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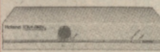

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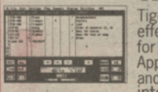

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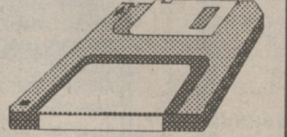

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WANTED Atari 8 bit disk software, also hardware and contacts. Send lists and prices wanted or just write to Mark Smith, Andover Road, Bestwood, Notts NG5 5FD.

TOSHIBA 1200 HB wanted or similar laptop, must have 20 meg HD. Tel Woking (0483) 764857.

MUSIC X or any Amiga music soft/hardware must be cheap. Please phone (0643) 707404 after 6.30pm.

WANTED for ST 520, Protext V.4 or any business software also Multiface. Telephone Ian on (0506) 855247 or write to Ian Johnstone, 14 Carledubs Crescent, Uphall, West Lothian EH52 6TH.

WANTED Seagate 157N-I SCSI hard disk, or Canon PJ1080 inkjet printer + manual. Will pay £125 for each, and also postage. Ring Jerome (0481) 711149.

WILL swap Amiga F29 Retaliator as new for F16 Falcon. Must be in good condition. Contact Stephen, 13 Lambton Avenue, Consett, County Durham DH8 7JE.

MINIX for Atari ST wanted manual or no manual, will pay. Write or phone Ben Tran, 19 Ivel Road, Stevenage, SG1 3HJ. Tel (0438) 726161.

SOFTWARE wanted for Amiga 500 to swap in France. Write with your list. Carrette Roland, Rue De Piscop, Res du Village, B16 Saint Brice s/s Foret 95350 France.

WILL swap Amiga F-29 Retaliator (Ocean), Rainbow Islands (Ocean), Deluxe Paint II, (Electronic Arts) for other Amiga games Tel 051-430-6504 ask for Paul.

WANTED BSW video camera, Panasonic WV or Hitachi HV series. Tel (0633) 891870 evenings.

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HAS anybody out there got an Amiga DD1 disk drive. Trying to build up for myself without funds. Thanks Dave (0296) 641806 after 7.15 pm.

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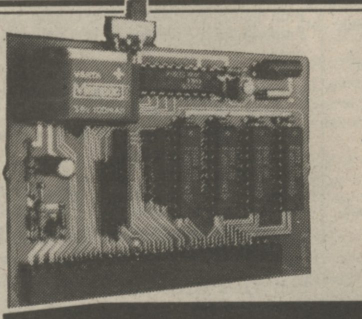

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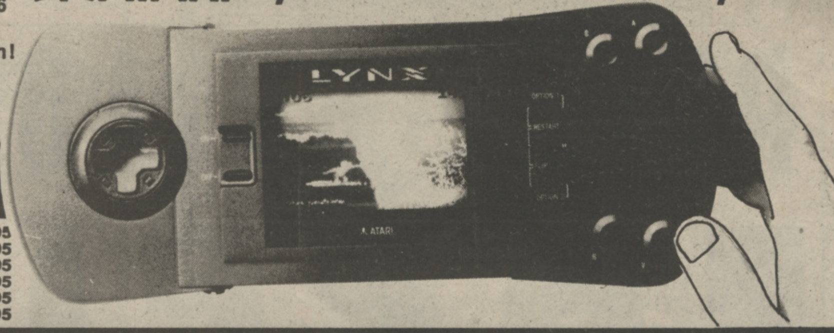

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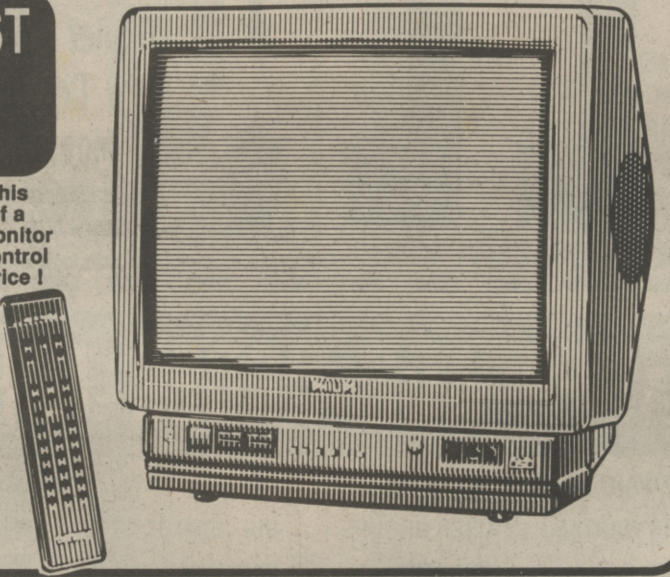

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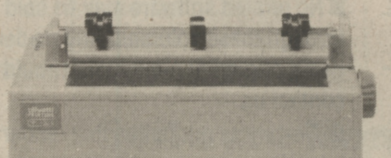

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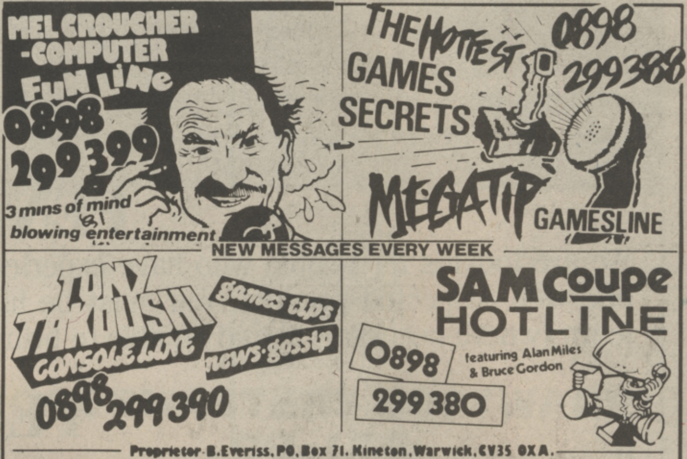
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WANTED Applie IIE software, word processor, 80 column card etc 051-425 3292 evenings.

BETA disc drive Spectrum DDS 4.05. Cash waiting for 5.25" bootup disc or utility word processing discs. Please make my day. Phone (0944) 70229 any time.

WANTED any two IBM test drive 2 upgrade disks for Motorbike Madness and Robocop. Call Michael (0268) 413145 all originals.

ZX87 for Schools project with 16K, printer and software if possible (0752) 562928 after 4pm.

WANTED DTP software for Amiga. Reasonable price or swap for original games. Phone Donna (0466) 3177 evenings, 3622 daytime.

AMSTRAD CPC owners now hear this!! Contacts wanted, 100% fast reply guaranteed!! Write now to Russell Whitwell, 2 Chase Mews, Chase Road, Ross-On-Wye, Hertfordshire, HR9 5JQ.

'C' development environment for the Amiga complete with all relevent manuals. Phone Philiip on (0480) 811165 if you can help.

ATARI 520 ST/Amiga. Will pay up to £300 depending on software etc. (not dealer) Midi keyboard also required. Tel (0202) 297819 Bournemouth area.

WANTED books on DBase three plus also Timeworks word writer and KData and KWrite for PC Leyland 061 998 3494.

TYPE-INS Cheats, pokes, art package, graphics, computer sonics (on cassette), for key the CPC magazine send SAE to 30 Burnedge Fold Road, Grasscroft, Oldham, Lancashire.

Z88 wanted leave phone number at 071-373 4479, room 212: Tom.

WANT to swap Sega Master system for Atari ST. Includes golen, Axe, R-Type, Shinobi, Afterburner and many more plus Light Phaser worth £470. Write to: M. Rane, 28 Stapleton, Formby, Merseyside.

WANTED Ext modulator for Atari 1040 STF also sound and graphics demos every disk you send I will send blank . Flat 119 Mount Pleasant, Bracknell.

9600 or above modem wanted preferably cheap! Then contact Sanjay on (0703) 638099 daytime/weekends (Saturday only) Thanks and day time on weekdays.

WANTED Empire (interstel) original and docs. for ST phone Ian 081-958 5508 after 7pm or Sat/Sun.

WANTED Amiga PD contacts earn yourself some blank disks by supplying me with the latest demos etc. Tel: (0473) 713715 between 6-9pm only.

WANTED Atari or Amiga mouse any condition or not working Basildon, Essex (0268) 417775.

SEVEN gates of Jambala C64 cassette version. Other titiles considered. 26 Seathorne Walk, Bridlington, East Yorkshire (0262) 677956 PM only. Ask for Neil or Lynn.

PET 2,3,4,8 software books and 4040 disk drive also service disks, books. Please phone 081-422 0044 David.

PRINT-OUT of instructions from ST canvas paint disc. Will pay expenses. Phone Nottingham 631439 after 6pm please.

DISK drive and a Light Pen wanted compatbile with C64. Will pay postage. Contact Adrian, 62 Seven Acres, Parton, Whitehaven, Cumbria CA28 6RF.

MEGADRIVE games wanted!!! If you don't want yours? Sell them to me old or new? Stoo, 94 Ashgrove Road, Goodmayes, Ilford, Essex IG3 9XD.

WANTED Sam Coupe + disk drive, will pay up to £180. Also QL, will pay up to £80. Phone (0590) 645627 near Southampton.

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Z88 wanted leave phone number at 071-373 4479, room 212: Tom. ■

THE PD COLUMN

There is a lot of software out there available for the price of a disk. This week Adam Waring turns his attention to a powerful programming language for the Amiga and two handy programs for the ST.

Fancy learning another language? If Linguaphone is not exactly what you had in mind, then how about C? C is an extremely popular computer language. Many commercial programs are written in it, and if you know it, it's an invaluable qualification to have.

It's a high level language. In basic terms, that means it's not as complicated as machine code, but a darn sight more powerful than 'easy' languages like BASIC.

Unfortunately learning to program in C is far from easy. You can't just pick it up in a few minutes. So if you can't find someone who knows the lingo to teach you, proper reference material is necessary.

Walk into any bookshop though, and you'll find that the price of a decent book on the subject is prohibitive to say the least. A commercial C package will cost you several limbs too.

PD comes to the rescue once again! For now you can get a complete C package, plus an in depth tutorial for the price of a few disks.

C Manual is written by Scandinavian programmer Anders Bjerkin. It comes on three disks, packed with everything you need to learn the language. And in some ways, it's better than any book could ever be. The advantage with a software-based tutorial is that there can be real 'live' examples to illustrate the points. Books tend to rely on reams of boring listings that take hours to type in, and even then may not work because of typing errors. To test out the programs in this language lesson, all you need to do is load them in.

C Manual takes the beginner through all the stages involved in learning the language. From the first faltering steps through to advanced examples. Within a couple of weeks, you'll be a programming wizard, maybe.

If you're going to take C seriously, you'll need something to write and run those programs on. *NorthC 1.1* is such a program, and allows you to edit and compile your programs. There are a lot of document files to wade through, which should help you get the best out of the program.

Both *NorthC* and *C Manual* are available from Amiganuts. They complement eachother perfectly, so it may be a good idea to get them together. *NorthC* is on disk 645, while *C Manual* comes on disks 639A, B, and of course, C.

ST

Gunning PD has a disk full of programs that could be music to your ears. Its

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nusic disks are crammed with programs hat all have one thing in common – they ll sound good!

For starters, there's a program that llows you to compose your own tunes nd replay them. It's called *Xbios Music*, strange name, but it's fun and easy to se. Plonk down the notes with the nouse and play away. My efforts, unfor-unately had everyone reaching for their ar plugs. However, there are a couple f pre-defined tunes to show you how it hould be done.

It's fairly basic stuff, the notes are layed one at a time, and no fancy ffects are available. For budding eethovens though, it could be the start f great things to come.

There are a whole selections of jin-les on the disk. Just click on one from ne desktop, and you'll be treated to a ew seconds of silly sonics.

Many of the programs are demos of ust what commercial packages will llow you to do. Of course you can't edit nything yourself with these, but you can lay back examples of what these pro-rams are capable of. Hopefully, as far s the manufacturers are concerned, npressing you enough to go out and uy the full blown versions. Demos nclude *Popminus* and *Mastersound*. wners of the program *EZ-track* will also nd a few pieces of music to run.

Speaktext has is a synthesiser program that echoes everything you say in 'real' speech.

It really is quite remarkable. Type in a word or sentence and the program does its best to output the text – via the loudspeaker! It works surprisingly well, most of the words are spoken as typed. With more complicated sounds, its a case of trying to type the word as it sounds, rather than as it's spelt.

Hours of fun are to be had getting the ST to tell you friends and family exactly what you think of them.

All these are available on Gunning's Music Disks three & four (the pair are available together for double sided drive owners).

WRITE ON

Feel that you should keep in touch more? What better way than writing a letter. But if your handwriting is anything like mine, then you'll have enough trouble reading your own scribblings, let alone any one else making out what it's supposed to be saying.

ST Writer is a PD word processor that has been put into the public domain by the mighty Atari itself. It allows you to create your masterpiece, save it to disk, and print it out on your printer.

As well as typing in the words, the beauty of a word processor is that you can change things after you've written them. If you make a mistake, or change your mind about what you've just written, you can simply rub it out and put it right. Taking this a step further, it's easy to move whole chunks of text around, so sentences can be moved around without having to re-write them.

There are a few specials available too. There are facilities for search and replace, so if you want to send the same letter to ten different people you know, then it's simple to replace the names.

Text can be justified in a number of ways, useful for getting rid of those ragged edges. You can centre things too. Great for your letter headings.

The program will work in any of the modes that the ST is capable of displaying. So if you have the mono monitor you'll be able to use it with loads of high resolution characters on the screen, whereas if your machine's plugged into the 26 inch living room telly, you'll still be able to make out the letters.

It's not the best word processor around, but it does it's job well, and is certainly better than pen and paper. One of the sources where you'll find a copy of *ST Writer* is The South West Library. ■

WHERE TO GO

Amiganuts, 169 Dale Valley Road, Hollybrook, Southampton, SO1 6QX. Telephone 0703 785680. Nuts about your Amiga? Then call Amiganuts - a library that caters for the Amiga, and the Amiga only. Top quality PD at rock bottom prices. Disks start at just One and a half quid.

Gunning PD, 47 Auchingane, The Tryst, Edinburgh, EH10 7HX. A brand new ST library to enter the PD scene. Send three first class stamps for a catalogue disk. Gunning charge just £1 per disk, irrespective of whether they are single or double sided. Could be worth a shot.

South West Software Library, PO Box 562, Wimbourne, Dorset, BH21 2YD. Rather large ST library with absolutely loads on offer. Send a jolly big SAE for the catalogue. Prices are £3 a disk, dropping to £2.50 if you order four or more.

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581: SID V1.6 Marvelous CLI replacement program. (We use this a lot!!)
607: AMIBASE V3.67 An extremely good database prog by Keith Grant
609: THE RUN by T Richter HIS FAVOURITE and you can see why! (1 MEG)
622: MODULES Guaranteed to run on the excellent MEDV2.1e.
623: MODULES Another selection of music for the excellent MEDV2.1e Prog.
624: MODULES (You have Asked, So Here It IS), more music for MEDV2.1e users.
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640: An excellent games collection, including train set and arcade type, Xfire.
645: NORTHC V1.1 Latest 'C' Tool Update by Steve Hawtin.
648: The latest NOISETRACKER V1.1 PLUS, now has prefs and CLI features.
657: UTOPIA New seaside postcard slideshow. VERY GOOD!
658: NEW UTILS. Inc: SKYPAINT V2, NEW RIPPPER, ANIMBRIDGE, LACE CONTROLLER ETC
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Put some LIFE into your machine

Commodore Format: It'll be quite good. Probably.

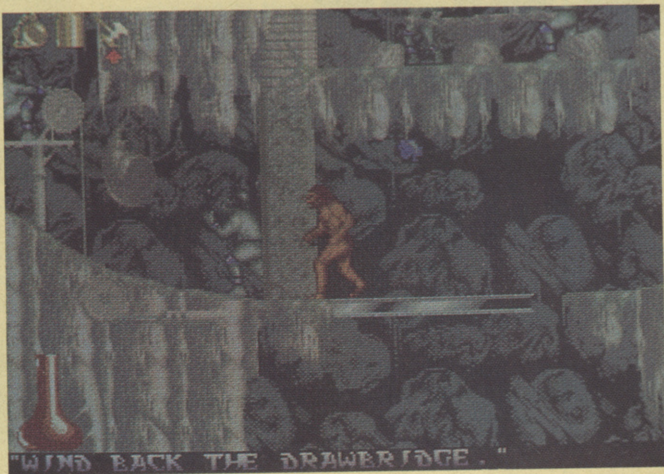
FIRST ISSUE ON SALE SEPT 20th * TELL THE WORLD THE GOOD NEWS!

WIN the Beast II, Psygnosis's stunning game

Remember *Shadow of the Beast* from Psygnosis? You don't? Well, you missed out there, but don't fear because *Shadow of the Beast II* is now available. Now normally you'd pay a very reasonable £34.99 to get your Amiga (it's an Amiga-only competition this week) wrapped or warped around *Beast II*. However *Express,* in conjunction with Psygnosis, brings you a stupidly easy competition which will win you a copy of the game for just 58p – the price of this issue.

Not only could you win *Shadow of the Beast II*, you also get a T-shirt thrown in. We have 10 copies of game and garb to be won. You can read the full review of the game on page 8 of this week's *Express* but, out of the kindness of our hearts, the competition page brings you a few edited highlights: "As you'd expect from Psygnosis, the presentation of *Shadow of the Beast II* is very polished ... the inclusion of puzzles and clues gives the game a more adventurous leaning than the original, and make the proceedings much more interesting and addictive.'

Trenton Webb, the games editor of *Amiga Format* magazine, also told *Express* this about the game: "The opening sequence is movie-like with a demon stealing a baby. Atmosphere is well set here, and remains right up to the end sequence which has some great waaaangy (*We checked on the spelling of this word in Shambers Dictionary of Onorous Onomatopoeia*) guitar sounds. There are loads of puzzles, like the one where you have to let one of the characters go in order for him to open ... but I won't give the game away. There's split-second timing and plenty of action. I'd call it a puzzle platform bash-'em-up game. You get special weapons and some weird monsters, like the giant piranha fish, tree pygmies, and huge vampire bats. All in all its a tough game but rewarding." And you can't say fairer than that, if you know what I mean, and I think you do.



So what do you have to do to win *Shadow of the Beast II* and the accompanying T-shirt? As usual, it's a simple competition, and as usual you have to buy the magazine to enter. Last week's 'spot the non-purchased *Express*' coating on the competition page gave rise to at least a thousand people being visited by members of the local order of the Aardvarks. This week, we have gone even more high-tech: somewhere on this page there is a hidden camera, we, or rather new boy Steve Coulter, can see whether you've bought the issue or not. If you haven't, several gallons of rancid Angel Delight will fall on your head the next time you see or hear the word Gazza.

All you have to do to win is to answer the following simple questions which concern shadows and beasts:

Question 1) Who was known as the Great Beast?

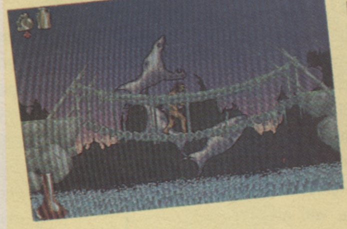
A) Diego Maradona
B) Aleister Crowley
C) Orville (as in Keith Harris)

Question 2) Who is the lead guitarist for the Shadows?

A) Hank Williams
B) Marvin Gaye
C) Hank Marvin

Research the answers using any public library or the *Smash Demons 1913 Fab Pop Year Book* and fill in the form below.

All entries should be sent to: *Beast* Competition, *New Computer Express*, 30 Monmouth Street, Bath, Avon BA1 2BW. Entries to be received no later than Monday September 14 in the year 1990. The first 10 correct entries drawn from the news editor's crumpled beret win the prizes. The editor's decision is final. Exotic postcards are welcome and brighten up the office. ■



NAME ....

ADDRESS ....

....

....

....

The answer to question 1 is .... **The answer to question 2 is** ....

WINNERS

It would appear that everybody in the known world seemed to have wanted a copy of *Pipe Mania* from Empire. Copies will be in the post as soon as humanly possible, so enjoy yourself.

So, without further ado ... here are the winners:
M Kirkenread, Dollar, Scotland; R Huq, Ipswich, Suffolk; F Ashley, Birmingham, West Midlands; Nicolai Plum, Bath, Avon; R Perry, Norwich, Norfolk; J F Saunders, Corringham, Essex; Adam Jones, Kilmarnock, Ayrshire; Stephen Barwick, Stratford, London; S J Chapman, Renishaw, Sheffield; R Stanley, Polmont, Sterlingshire; Jonathan Rowlinson, Beighton, Sheffield; David Slater, Leominster, Herefordshire; Robert Wareham, Dore, Sheffield; Martin Dunn, Canterbury, Kent; K S Rane, Gloucester, Glos; David Earl, Bedford, Beds; Bimal, Raja, Streatham, London; John Palmer, Warblington, Hants; Richard Clyne, Dalgetty Bay, Fife; Darran Wesson, Malin, Sheffield; Nigel Spowage, Scunthorpe, South Humberside; R Timbrell, Fouroaks, West Midlands; Shabaz Yousaf, Slough, Berks; Charles Gibson, Belfast, N Ireland; David Stewart, Kilwinning, Ayshire; Stephen Lowles, Huyton, Merseyside; K Bhogal, Hayes, Middlesex; E W Fairweather, Lincoln, Lincs; Jamie Cummings, Scarborough, N Yorks; Paul Gates, Crumpsall, Manchester; John Neale, Scunthorpe, S Humberside; Andrew Main, Badger Hill, York; John Watson, Glasgow, Scotland; George Barron, Rosyth, Fife Peter Hepworth, Beeston, Leeds; Anthony Mayall, Mitcham, Surrey; N Lane, Eaglescliffe, Stockton-on-Tees; L Van Giap, Hitchin, Herts; Geoff Dixon, Golborne, Warrington; R Dillon, Belfast, N Ireland; M Haddon, Yeovil, Somerset; N S Ravat, Leicester, Leics C Bury, Whitecross, Herefordshire; A Wright, Grimsby, S Humberside; A F Squires, Boston, Lincs; R Fance, Hockley, Essex; Helen Sharpe, Driffield, N Humberside; J Lycett, Ramsgate, Kent; J L Phillips, Blandford, Dorset; M Goodwin, Runcorn, Cheshire; N Prescott, Bristol, Avon; P Richards, Market Harborough, Leics; M J Ball, Lincoln, Lincs.

HERE COME THE GAMES

AMSTRAD (STAND F18)

It might be worth your while to keep an eye on stand F18. Amstrad is coming to CES on the back of the new Plus range of computers and consoles. The CPC 464 and 6128 Pluses will both be on show, as will the GX4000 console.

Amstrad's stand will be one of the biggest it has yet taken on the road, with some 50 playable machines available. Cagey as normal about what it will or won't be showing, it is expected that new games will be previewed for the new machines. We do know that several games houses are currently developing software for the console – which presently only has two games in the form of the free *Burnin' Rubber* and *Fire and Forget* from Titus, so CES would be the ideal place to really put the GX4000 through its paces with some new cartridges.

Burnin' Rubber
PRESS FIRE 1 TO START
PRESS FIRE 2 FOR OPTIONS
COPYRIGHT 1990 OCEAN SOFTWARE

• Out at the show: the GX4000 console.

Every game manufacturer worth mentioning will be in Kensington next week for the event of the year – the Computer Entertainment Show.

Enjoy! That's the watchword for the Computer Entertainment Show (CES) to be held at Kensington Olympia, running from September 13 to 16. Although the first two days are trade only, the weekend will see new games, hardware, competitions, and special offers for the general public.

Unlike many previous computer shows, CES is geared towards leisure. That means that consoles will do battle with hand-helds, which in turn will face-off Amigas. While the trade angle represents long hours of lunch, dinner and post-prandial drinks in which deals will be made, the public days will offer coin-ops, demos, prizes, new games to see and play.

In order for you to plan your trip to what looks like being one of the biggest events to hit the computer world in years, *Express* is providing an exhibitor-by-exhibitor guide to all that's best.

NINTENDO (STAND E50)

Nintendo is out for blood this Christmas. Already a big player in the global console market, CES will see it flexing it's corporate muscles in the UK. First up, and riding the crest of the *Teenage Mutant Hero Turtle* wave, Nintendo will have its Mutant Machine on show. The package comprises the Nintendo Entertainment Centre and a copy of the platform, 'pizza-'em-up', turtle game. With a vast range of games ready to come out, Nintendo will probably be putting on quite a show in order to make its presence felt by the likes of Amstrad, Sega, Commodore and Atari.

MINDSCAPE (STAND B15)

Mindscape has Tom Cruise to offer. *Days of Thunder*, the game of the Cruise's new *Top Gun*-with-cars movie, will be showing. Along with this will be; *Wing Commander*, new out for the PC; *Ultimate Ride*, by Chris Grey of *Superbike* fame, on all major formats; and *Savage Empire* which makes use of characters from *Ultima VI*.

If that wasn't enough there will also be *4D Boxing* and *4D Sports Driving*; and there's *Track on 2* , an air traffic control simulation which can be linked to, as yet unnamed, flight sims. As yet no console action has been finalised.

ZEPPELIN

Zeppelin will be hitting CES with new games and two new labels. Zeppelin Platinum 16-Bit will be releasing £9.99 games in quality packaging. The mother company feels that the price is right and is hoping for companies such as Ocean to follow. On top of this the Cognito label has been dropped, to be replaced by Impulse.

Games at the show will be: *Blinkey Scarey School*, *World Soccer* and *Jockie Wilson's Darts Challenge*. There are also two BBC TV games ready for the off, one of which is a highly prized Aussie title.

Like most of the other software houses exhibiting, no console releases have been finalised.

AUDIOGENIC (STAND E16)

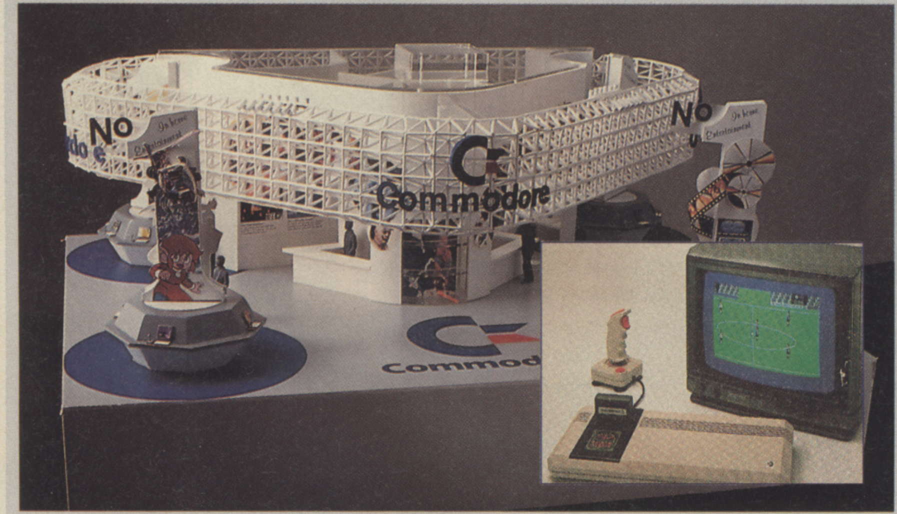
Arcade action with Audiogenic. *Exterminator*, its first coin-op conversion for the ST and Amiga, will be on view in both home computer and arcade machine forms. It will also be giving a British showing to its first puzzle game for Nintendo, called *Loops*. The game will not be on sale in the UK for some time, so it might be an idea to give it a look while you can. Aside from these, there will also be a *Bubble-Bubble*-ish game called *Helter Skelter*, and *Arcade Quiz* (not sports-based we were told). No console news as yet, but plans are afoot and Audiogenic is looking for a deal with Amstrad, so keep your eyes open.

MICROPROSE (F22)

MicroProse took great pride in telling us about the huge stand it is planning to have, and the number of attractions it will weigh that self-same stand down with.

Along with playable demos will be large-screen videos of new games such as *Rick Dangerous II*. The company will show arcade versions of many of the games which will be on free play, although tokens will be issued to give everyone at least one crack of the whip. This means that games like *F19*, *Betrayal*, and *MI Tank Platoon* will probably be played to death. While

COMMODORE (STAND G6)



• Commodore has plenty of space in its futuristic stand, and plenty to show like the GS C64 console.

With both CDTV and the C64 console up its sleeve, the question is what to show first? Commodore has plumped for the latter. CDTV will get a brief trade showing on the first day of the show with more software (or is a compact disc actually hardware?) promised, but the public will not get to see it. However, the main thrust of Commodore's CES strategy will be the Amiga and the C64s. Another Amiga educational bundle is in the pipeline, and the C64 will be looking at more releases. The Commodore stand is also a sight to behold – a space-age structure with a vast amount of floor space to hold the numerous playable machines.

WHY, WHERE AND WHEN?

The Computer Entertainment Show will, it is hoped, be one of the biggest computer trade meetings of the year. Business will be done, deals made, and games played.

The venue is Kensington Olympia in London. Although CES runs from September 13 to 16, the first two days will be for trade meetings. Members of the public should get their walking shoes on – and from the size of the venue and the number of exhibitors, they will need to be sturdy shoes at that – ready for the last two days. Gates open at 10am and close at 6pm. By the way, a portion of the entrance fee will go to the Childline Charity.

How to get there; Kensington Olympia tube station will open during the show; change at Earls Court (on the District and Piccadilly lines). If you're driving, then think twice. Unless you've managed to reserve a parking place – very difficult – you will find parking to be a problem. Three bus services are also available from Earls Court: 74, 31, and 30. British Rail also runs services to Kensington Olympia station. These will be synchronised with InterCity trains from the north-west and south-east of England.

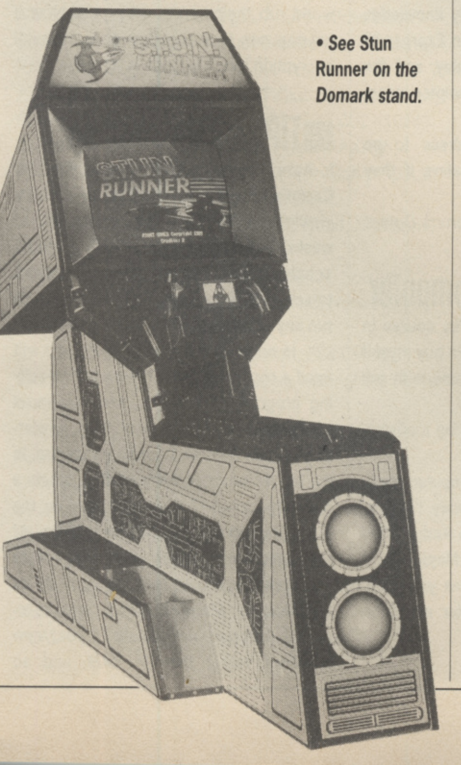
It is expected that hotel accommodation will be rarer than a dodo in hunting season, especially near the show itself.

members of the public are playing the games, the trade crews will be wined and dined in the hospitality suite.

DOMARK (STAND F12)

Domark appears to have pulled out all the stops for CES 1990, but then again it normally does. The stand is futuristic, with a doomy 'post-holocaust' feel. Games to look out for will be: Tengen's *Stun Runner* (there will be two *Stun Runner* arcade games on the stand for comparison), *Badlands*, *Thunder Jaws*, *Hydra*, *Skull and Crossbones* and an old favourite in the guise of *Hard Drivin'*.

James Bond is also there with *The Spy Who Loved Me*. Frankly there will be more games software than the average player could get through in a year. *Badlands* from Tengen will also be there, a follow-up to *Super Sprint*, it features sprint racing on a nuclear background. You are armed and dangerous. Once you've stopped playing the games, there will also be a shop for T-shirts, badges and, of course, the software.



• *See* Stun Runner *on the* Domark *stand.*

CENTRESOFT (STAND F14)

Not well known to the public, Centresoft is one of the biggest distributors in the computer world. Due to Atari's absence from the show, the Centresoft stand will be the only place to see the Lynx and Gameboy hand-helds in all their glory. Centresoft are also distributing the Sega Megadrive, and the Nintendo Entertainment Centre. If you can get it in, it will be a treat.

ELECTRONIC ARTS

Electronic Arts is intending to blast the competition at CES. The company is very 'up' and will be showing some 13 new(ish) pieces of software. *Battle Chess II* will be there for the warped strategy warriors among you. *Magic Fly, Lord of the Rings, Chuck Yeager, Stormovik* and *Powermonger* are just a few of the names to be seen and played. Console owners, those of the Megadrive variety anyway, should be aware that both *Populous* and *Budokan* will be on view at the show.

GREMLIN (STAND H6)

Gremlin has had a good computer year so far, and now it has plans for the console market. At CES there will be plenty of playable demos, new releases and general good times to be had at the Gremlin stand. Look out for *DHSS Jane Seymour* and the free copies of *FOFT (Federation of Free Traders)* which are being packaged with it. Also there will be *Lotus Turbo Esprit Challenge* and *Team Suzuki* to watch and play.

OCEAN (STAND H4)

The Ocean stand is always worth a look at any show, and CES is no different. It will be previewing a number of its Christmas goodies, including cartridges for the C64 and Amstrad GX4000 consoles – *Robocop II* for the Amstrad will be one to watch out for. The wealth of goodies from Ocean should make its stand difficult to get onto, but rewarding once you have. Be prepared for surprises, new releases and demos.

ACCOLADE (STAND D16)

Accolade also has plenty to offer. With an excellent golf sim out this year, in the form of *Jack Nicklaus Unlimited Golf,* plenty more is to be expected. A new puzzle game called *Ishido*, looks simple - plays like a bitch, will be on show. The Accolade Graphics Engine will also be there to see, two games *Search for the King* and *Altered Destiny* make use of this. Finally, dear old Elvira of HorrorSoft fame will probably be flying around, so a wander over to the Accolade stand could pay dividends.

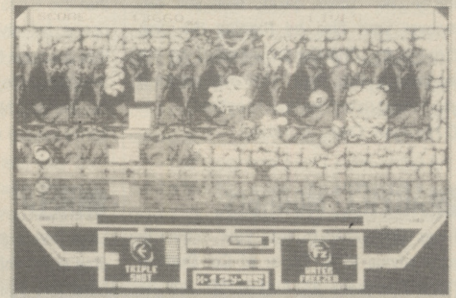
PSYGNOSIS

Psygnosis has other things up its corporate sleeve than *Shadow of the Beast II.* CES will see several new releases from the company; watch out for *Nitro*, a high-speed car racing game featuring night driving.

A game with the intriguing name of *The Killing Game Show* iis also due to be shown at CES. It features arcade quality platform action. You have to escape from a vertical maze against a set time limit. An interesting element of the game is the action replay; not only does this allow you to watch your mistakes over the difficult sections, you can also drop back into the game during the replay.

For the less energetic amongst you, Psygnosis is also showing *Pugsy*, a cutsie game featuring cartoon-like characters, some of whom are clad in Shaggy-like (or Happy Monday-like if you prefer) flared jeans; like zoinks!

Psygnosis have not confirmed any console software launches at the show but you never know, but keep your eyes peeled for *Shadow of the Beast* on the C64.

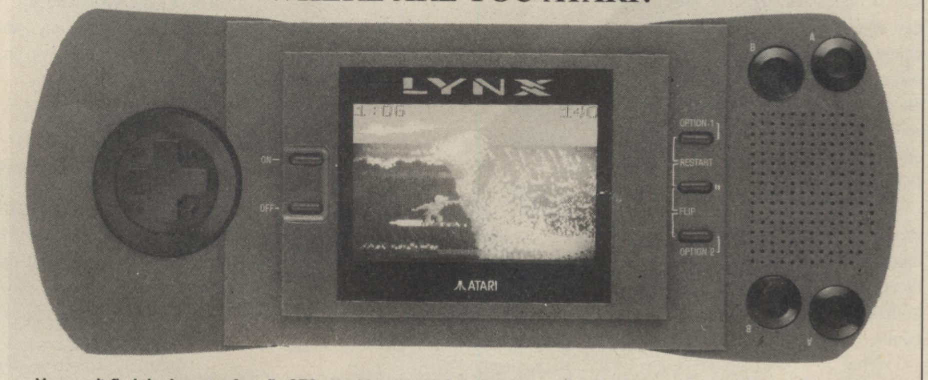


• The Killing Game Show, *weirder than* Blind Date *on acid? More fun than an all-nude* Generation Game?

FUTURE PUBLISHING (STAND F11)

Just when you thought it was safe to wander about Olympia. Yes, the staff of *New Computer Express* will be on the stand, ready to talk to you. If that's not good enough, representatives from our sister magazines *Amiga Format, ST Format, Commodore Format, S,Your Sinclair* and *Amstrad Action* will also be available for close questioning, brickbats and the occasional small gobbet of praise. There may even be the odd freebie.

WHERE ARE YOU ATARI?



• *You won't find the Lynx on Atrari's CES stand because it hasn't got one. Watch out for a double-decker bus mind...*

The more observant amongst you will have noticed the non-appearance of Atari at CES. The reason for this is that the company has decided to take its products around the country by bus. Rather than put all the goodies in one basket, Atari will be visiting a number of venues, so keep your eyes out.

If you do want to see the Lynx, or any other of the Atari kit you could try the Centresoft stand – really this is for trade only – or you could scavenge around the numerous wholesalers' stands.

TECH TIPS

Does your PC keep packing up? Is your Amiga less than friendly? Would your ST try the patience of a saint? Write to Keith Pomfret's Tech Tips and we'll soon see you right. Send your sorry stories to Tech Tips, Beauford Place, 30 Monmouth Street, Bath BA1 2BW.

■TIP! Disk stuff

Here is a tip: if you accidently format a disk using; `Format Drive DF0: Name Empty No icons quick`, then you can recover your files by running the disk through the Disk-Doctor supplied on the workbench disk. Note: This only works if you format using the 'quick' option!

D Harrigan, Derry, N Ireland

■ADVICE! Manners!

I was astonished to read your extraordinary advice to E. Taylor of Co. Durham (Tech Tips issue 93, August 18), that he should buy an Amiga Class of the '90s pack, rather than a 1040STE Business Pack, for word processing and database work.

It's not so much that I object to the ridiculousness of your recommendation, but more that I cannot understand how you can justify making such bald statements as: "There's no contest at all. The Amiga wins by a long head."

Although I suspect that you are just another knee-jerk Amigaphile, I look forward to your explaining to us all how a computer designed for games playing and graphics, with a notoriously slow disk handling system, a legendary propensity to crash at the most inopportune time, two hardware kludges in the form of Midi port and TV modulator, together with a selection of software that was never written to complement other features, could possibly compete on this issue with a machine bundle that has none of these failings and yet which also boasts an extra 512K of memory!

B Barrett, London N8

What was it you called me? Does this mean that although you're a self-styled computer expert, no-one ever took the trouble to teach you the rudiments of etiquette or manners.

What a shame that someone who demands reason and well-balanced argument should be incapable of the basics that are taught to young children. I stand by what I said. There is no doubt at all in my mind, the Amiga is superior to the ST. This doesn't mean that the ST has anything wrong with it, nor does it mean that I cast any aspersions on the ST. In simple terms the Amiga has better hardware, display, architecture and most important, potential. If you truly believe that the ST is a better machine, you are not a full shilling. Had you suggested that a colour Mac or an Archimedes was a better piece of kit, I might have agreed, but the ST? Nice computer, but not in the same league as the others.

■HELP! Logophiles

Logo lovers are wanted to help the children at our school. They are aged 7-11 and have just started work with Logo using both BBC and Amstrad PCW computers. They use Logotron Logo on the BBC computers and DR Logo as supplied with the PCW8256. Any listings or programs on disk will be welcome. All disks will obviously be returned ASAP. If there is enough response I would like to make a PD disk for the PCW, which can then be used to help demonstrate the capabilities of Logo. Our intention is to interest the children in the potentials of Logo as a start to programming work by showing them some interesting graphics displays. They will then be encouraged to develop their own prog's to draw simple patterns. Many thanks.

Adrian Joice, Geilenkirchen School, RAF Detachment BFPO 42.

So if anyone out there is a Logo person with the ability and the time to lend a hand, send Adrian a disk-full of progettes and listings. We'll look forward to hearing how the kids get on.

■TIP More info

I would like to contribute some additional information to two of your Tech Tips printed in *Express* 93.

- Z88 to Amiga (2000) file transfer (part of "Wacking WACCI" – A Dale of Nottingham)

The Music Suite of Newcastle Emlyn, Dyfed (0239 710594), produces an excellent utility called Z88-Amiga Link which not only supports file transfer both ways, but also allows files to be sent directly to the Amiga's printer. Transferred files can be saved to Amiga disk in Z88 format for subsequent up-loading, or imported into a WP program for further enhancement. All for around £20 – very good value. The Music Suite can supply the necessary Z88 serial cable if required, and also offers similar programs for Z88-to-PC and Z88-to-ST.

- Amiga quality output ("DTP Amiga" – A McCreadie, Glasgow)

Given Mr McCreadie's £1,000 (thank you very much), my choice would be (in fact, was) a Hewlett Packard DeskJet Plus printer at £600 and *Pagestream* DTP software at £130. The Deskjet produces 300 x 300 dpi, the same as most lasers, but is considerably cheaper to run and is fully supported by the much underrated *Pagestream*. The original *Pagestream* (V1.6 and below) was spoilt by some nasty bugs and could be crashed predictably. The bad name it thus gained is a great pity because it is an extremely powerful program with features not available on more expensive rivals (try rotating text in *Professional Page*,). The recent V1.8 has fixed the bugs (I haven't managed to crash it yet) and added some features (much faster printing, etc.) and was mailed to me from the US absolutely free! (Note for fellow *Pagestream* fan (I think) Jason Holborn: SDL didn't have any knowledge of V2.0 (your Amiga column in *Express* 89 p8) when I phoned them today, and the wonderful Digipro of Southampton seem to have sunk without trace.)

I'm happy for my address to be passed on to the above tipsters if they want more information.

Alan D Francis, Blandford Forum, Dorset

■HELP! Which computer

I will soon be starting a B-Tec course in computer studies and intend to buy myself a computer to aid me at home with my studies.

I'm also interested in using modems, DTP and programming.

Generally, I need a computer that's easy to use and value for money. I've narrowed my choice down to an Amiga A500 with 1Mb memory, or an Atari Mega 1ST.

Please could you give me your honest opinion on what computer would be best for me.

Thanks.

Tech Tips is one of the best sections in *Express*, so why can't it be expanded?

R West, Richmond-Upon-Thames

For the reasons given elsewhere in this column I have to go with the Amiga, although if you are really serious about DTP, programming and comms, you could save up a bit and go for the Macintosh, which is the friendliest computer on the market and the ultimate DTP machine.

■TIP! Russian text

In *Express* (18 Aug 90) a Mr A Dale enquired about a Russian/English WP setup. I have an Amiga 500 and work as a Russian interpreter, for any printing needing a Roman/Cyrillic mix I use the Workbench notepad with some fonts copied to it from Fred Fish PD disk no 202, these also work with *D Paint I* and *III* (not *II* though!). Please pass on my address to anyone who has trouble setting this up.

Keep up the good work.

T Meredith, 246 Procoy, BFPO 33 (d)

Enough to make the Lonsdales, Burgesses, Philbys and Macleans of this world rub their hands with glee. Now if anyone can find one that does factorial encryption too...

■TIP! Archie solution

I have been reading about Bertrum Carrot's attempts to improve the text-file viewing facility over the last couple of weeks, and have come up with a partial solution which, although a bit complicated to set up initially, works without having to run any programs before viewing the file.

In order to use this solution, you will need a copy of *!FormED*, the window editing program from Acorn, and you must configure your Arc to boot from (preferably) a hard disk, or a floppy on startup. In the top directory of the boot disk, create a directory called 'Templates' , and in the !Boot file add the line 'Set Wimp$Path :4.' (or whichever drive you use). This instructs the Arc to look through all its templates for windows such as error messages, directory viewers etc in your new directory, rather than in RAM, and so

allows you, using *!FormED*, to alter the definitions of these windows. So how do you get at them?

Deep in the bowels of the Arc, there is a filing system called 'DeskFS'. This filing system cannot, to my knowledge, be accessed from the desktop, and allows only very limited file operations. Enter this filing system by typing "DeskFS" at the OS prompt. A catalogue reveals 5 files, each of which contains the templates for windows required by one 'chunk' of the operating system. The one we are interested in is 'Templates.Wimp', but all the files must be copied. DeskFS doesn't allow multiple file copies, so copy each file individually into your own new 'Templates' directory.

Now, to change the windows, all you need to do is load *!FormEd*, and drop one of the templates files into it. Do this with the 'Wimp' file. You will see a window with a yellow title bar, titled '*commands' – this is the window used for displaying text files. Raise this window to the top, and bring up the menu over it. Go through the 'window flags' option, and select 'H scroll'. This gives the window a scroll bar and resize icon. Move the window right to the far left of the screen, and resize it to the full width of the screen. I also find it useful to make it slightly deeper, so I can see more of the file at once. Finally, remove the scroll bar and save the template file. Now re-boot your Arc, and double-click on a text file – 80 columns (79?) at last!

Using this method you can really customise the desktop – you can even give the icon bar a title bar, and make it movable! Or how about directory windows in tasteful green and yellow? The possibilities are endless.

This doesn't solve the problem of text files flying past your eyes, but at least you can use the full width of the screen, and a deeper window gives more time to reach [Ctrl] or scroll lock.
D Pirie, Dumbarton

So now we're halfway toward a solution to the solution. A colleague suggested a processor intensive loop/interrupt that gets in the way and slows things down, but as yet he hasn't worked out how to do it. I suppose a disk brake on the hard drive ...

■HELP! Double dealing

I have been intending to buy the utility: package, *PC Tools* for some time, but recently I noticed how expensive the package has become.

I remember about a year ago that its price varied around £75 upwards, depending on the supplier. I appreciate that the program has been updated since then, but I feel that software houses which increase their prices by virtually 100 per-cent in just over a year are utterly beneath contempt. After all, apart from sabotaging the 'Iron Lady's' inflation figures, such companies only serve to encourage piracy.

I have, however, been talking with a friend who is also interested in acquiring this package, and he thinks that on purchasing *PC Tools* you actually receive it on two copies, one on 3.5-inch, and one on 5.25-inch. After some cogitation on the matter, we decided to pool resources and buy one package between us, myself keeping the 3.5-inch copy and my friend the 5.25-inch copy.

I therefore decided to write to you to ask whether it is indeed true that both sizes come in one package before making such a purchase, owing to the exorbitant amount of 'dosh' which would be involved.
Ms A M Depeyser, Bournemouth

What you plan to do is dishonest, illegal and liable to get you a visit to the magistrate. The point of providing software in two disk formats is to allow you to install it whatever your disk size.

If you pool resources and buy the software between you, you still only have the right to it singly. You may not use it on your machine and your friend's machine simultaneously. If you do, you will deprive the software-house of a sale. When people do this they have to put the price up, and you didn't like it last time they did that, did you?

■HELP! C64 applications

I'd like to get away from the shoot-'em-up image of my C64 but don't know which way to turn for serious software. I can't afford to buy an expensive DTP and word processor and wonder if I can find these in the public domain or if there are any cheap ones. I have a C64c and 1541 disk drive.
M. McKinley, Filey, Yorks.

Look no further, there's a bunch of applications called *Top Twenty Software Tools* that contains the following:
Word processor, database, spreadsheet, appointment calendar, chequebook manager, autodial phone directory, file manager, memo pad, home inventory, calculator, music composer, music sampler, banner maker, video animator, draw and sketch, clip art sampler, font designe, sprite editor, character set maker and graphic designer.

The programs aren't state-of-the-art but for the £15 asking price (75p per program) it's a bargain and a nice introduction to the serious side of computing. ■

■HELP! User Groups

While I appreciate the help offered in Tech Tips, there are times when I feel that a user club or user group could offer more help on a specific problem, and continued support for the specific machines. Do you have a list of user groups? If so can you publish the details of those that deal with Atari, ST and BBC.
Kurt Simpson Ventnor, IOW.

And if I answer your question and just publish the three that you've asked for, I'll be in the doghouse from all the other machines so here goes, all the groups on TT's list:

ATARI PORTFOLIO – D Gilpin, Atari Portfolio User Group, 84 Cambridge Avenue, Gidea Park, Romford RM2 6QU 0708 730764
ATARI ST – Paul Glover, The ST Club, 9 Sutton Place, 49 Stoney Street, Nottingham NG1 1LX 0602 410241.
ATARI ST- Simon Rush, 42 York Road, Rayleigh, Essex SS6 8SB. Two groups: PAL for HiSoft products; FaST for Computer Concepts' Fast Basic.
BBC MICRO – Beebug, 117 Hatfield Road, St Albans, Herts AL1 4JS. 0727 40303.
BBC & SIDEWAYS RAM – Ron Marshall, Solinet, 41 Westbrook Drive, Rainworth, Mansfield, Notts NG21 0FB. .
CAMBRIDGE Z88 – Roy Woodward, Z88 Owners' Club, 68 Wellington St, Long Eaton, Nottingham NG10 4NG.
COLECO ADAM – Keith Mamer, UKAS 33 Homer Road, Croydon CXR0 7SB.
COMMODORE ALL MICROS – Jack Cohen, ICPUG 30 Brancaster Road, Newbury Park, Ilford IG2 7EP 081-346 0050 home: 081 - 579 1229 day.
COMMODORE AMIGA – UK Amiga Users Group, 144 Charles Street, Leicester LE2 00D 0533 510066 voice; 0533 517615 BBS
COMPUCORP – Compucorp University Users Group, c/o Compucorp, Cunningham House, Westfield Lane, Kenton, Middx HA3 9ED
DRAGON – Paul Grade, National Dragon Users Group, 6 Navarino Road, Worthing, Sussex 0903 207585.
EINSTEIN – Graham Bettany, UKEUG 80 Dales Road, Ipswich IP1 4JR .
ENTERPRISE – Tim Box, Independent Enterprise User Group, 50 Holdenhurst Avenue, Finchley, London N12 0HX 081-346 8032
GENERAL (ADVANCED) – Willem van Pelt, Compuser, Jacob Jordaensstraat 15, NL 2923 CK Krimpen a.d. IJssel, Holland Tel 31 01807 19881. Written in English.
GENERAL HOME MICROS – Steve Winter, Chic Computer Club, PO BOX 121, Gerrards Cross, Bucks SL9 9JP 0753 884473
HP HANDHELD – HPCC membership Secretary, Geggs Lodge, Hampton Road, Deddington Oxford EX5 4QG
HITACHI MBE 16002 PC – Bruce Ainge HICUPS 16 Nine Acres Road, Cuxton, Kent, ME2 1EL 0634 715759
IBM PC – The IBM PC User Group PO BOX 360 Harrow HA1 4LQ 081-863 1191 I BBS 081-863 6646
JUPITER ACE – John Charter, Jupiter Ace Forth User Group, 17 Spring Wood Close, Dunston, Chesterfield S41 8BS 0246 237555 .
LYNX – R B Jones, Lynx User Group, 39 Ashton Close, Needingworth, St Ives, Cambs.
MATMOS PC/ADLER – Ron Drew, Matmos Users Group, Clattering Ford, Roadhead, Carlisle CA6 6NT 069 76672.
MEMOTECH – Phil Eyres – Memotech Owners Club, 23 Denmead Road, Harefield, Southampton SO2 5GS 0703 585106

MEMOTECH – Andy Fox , The Software Source, 56 Rochester St, Bradford BD3 8ED. .
MOTOROLA 68xxx MICROS – Rick Applegate, 68 Microgroup, 8 Great Cob, Springfield, Chelmsford, Essex, BBS 081-316 7402
MSX SYSTEMS – Craig Bell, MSX UK, North Lodge, Caimhill Road, Airdrie, Lanarkshire ML6 9RJ 0236 64045
MSX SYSTEMS – Keith Neal, MSX Link, Austerby House, 80 Austerby, Bourne, Lincs PE10 9JL
MSX SYSTEMS – Lee Simpson, MSC User Group, 3 Mayfair Pl, Tuxford, Newark, Notts NG22 0JD
NASCOM/80-BUS/CPM – Scorpio Systems, PO BOX 286, AYLESBURY, BUCKS HP22 6PU 0296 624868
NEWBRAIN – Ron Bury, NewBrain Support Grp, 70 Cranberry Lane, Darwen, Lancs BB3 2HL 0254 771891
NIMBUS/RM AX/VX – Dr Martin Hatfield NIMBUG, 13 Belle Vue Ave, Gosforth, Newcastle-upon-Tyne NE3 1AH 091-285 7806
NORTHSTAR – Brian Haines, North Star & CP/M Grp, 9a Sharpleshall St, London NW1 8YN. .
OSBORNE/CPM/MSDOS – Jeremy Browne BOOG, 102a Aldershot Road, Fleet Hants GU13 9NY 0252 621745 voice, 626233 BBS
PSION ORGANISER – Mike O'Regan, IPSO, 130 Stapleford Ln, Beeston, Nottingham NG9 6GB 0602 735482 SAE.
QL & SIMILAR – Phil Borman, Quanta, 15 Grosvenor Cres, Grimsby, South Humberside DN32 0QJ. 0472 49850
RESEARCH MACHINES – Steve Rochford RM National User Group, George Stephenson High School, Southgate, Killingworth, Newcastle NE12 0SA. 091-268 2002
SCHNEIDER EURO PC – Alex Kefford, SEPUG, 11 Crabbet Road, Three Bridges, Crawley, West Susex RH10 1NF. SAE.
SHARP – Andrew Ferguson, Sharp User Go, 11 Harcourt Close, Henley on Thames, Oxon RG9 1UZ. 0491 574850.
SIRIUS – Simon Sheppard, ISSUE PO BOX 222, Brighton BN1 3BR. .

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AMIGA 3000: THE NEXT GENERATION

With the Amiga 3000 Commodore has moved into the fast lane with a 68030 processor and megabytes of memory. Keith Pomfret took a look at the exciting machine and the new version of Workbench.

There may be more Amigas in the future but the Amiga 3000 looks like the top of the Amiga evolutionary tree. Anything new will branch sideways, not up. A year's hype, a lot of promises and a good deal of conjecture finally revealed three machines bearing the Amiga 3000 badge. The cheapest of Commodore's serious workstation beaters will set you back £2,875, but more of prices and specifications later.

When you take your shiny new Amiga 3000 out of the box, you could be forgiven for thinking that you'd got a PC by mistake. The small footprint, sturdy metal casing and business-like appearance are reminiscent of the current generation of power PCs.

Head on, the fluted styling is broken up only by a pair of indicator lights for power and drive, the solitary 3.5-inch disk drive and a chunky 'Lego' button on the right-hand side that powers the Amiga up.

The keyboard is revised and feels more solid than its predecessor on the B2000. On the right hand side of the case are the mouse/joystick/pointer controls at desk level and the mouse provided is the clunky Amiga one that we all know and modify. The mouse looks the same as all Amiga mice have done but is one of the current generation with proper switches instead of soulless clickers.

Around at the back of the machine there are plenty of holes, sockets and connectors to allow a plethora of hang-'em-offs.

As well as the more usual serial port, parallel port and RGB connector there's a SCSI port for more hard drives, a floppy drive connector, video out and mode selector and a pair of stereo jack plugs to carry the sound to an external amplifier or monitor.

The two video outputs mean that as well as running the standard Amiga monitors (or even a TV set via the modulator if you're a total cheapskate), a high resolution VGA PC monitor can be connected. At the highest resolution supported by the new machine, a VGA monitor becomes essential.

On the software side of things you get Workbench 2, ARexx and AVision. Workbench 2 is the package that we all thought would be Workbench 1.4 with a few extra tweaks. ARexx is a user friendly programming language designed to take the pain out of the CLI and AVision is a multimedia development environment that controls the whole multimedia chain rather like a super-intelligent octopus with many hands to drive many different media simultaneously.

CHOICE OF THREE

There are three models wearing the Amiga 3000 badge. For £2,875, you get the slower (16MHz) 3000 with a 68030 processor, 40Mb hard disk drive and the chunky 68881 maths co-processor.

If your wallet stretches to £3.450, you can have a 25MHz 68030 machine with the 68882 co-processor and the same 40Mb storage. The real cashflow crusher is the top of the range £3,800 model which mirrors the middle one in all but its 100Mb hard drive.

Three useful machines but the clever money is betting that the middle one will cull the most sales.

On power up, the quiet(ish) fan and the quick hard drives vie for which make the most noise, and the drives win by a short decibel. There's enough noise to know that the machines are on but not the turbine in a railway tunnel symphony of white noise so indicative of PCs (especially Amstrads).

DISPLAY

As well as the current Amiga displays, there are two new ones: a four colour from 256, 1,280 x 400 mode and a 16 colour from 4,096, 640 by 480 mode. Those in themselves wouldn't be special but the fact that they don't have to interlace to do it should raise a couple of eyebrows. This high-resolution non-interlace mode means that a VGA PC monitor is needed, hence the 15-pin PC-style connector on the back.

In order to display the new VGA modes and the old Amiga screen modes, you'll need either a couple of ➤

AVISION

AVision is the interface that can make the Amiga 3000 a powerful multimedia driver. Controlling all inputs and outputs it utilises the multi-tasking power of the Amiga to keep the various audio, video, and digital aspects of multimedia in synchronisation.

Only just released to developers, AVision is too big a subject to cover in a short review so watch *Express* for the full AVision story soon.

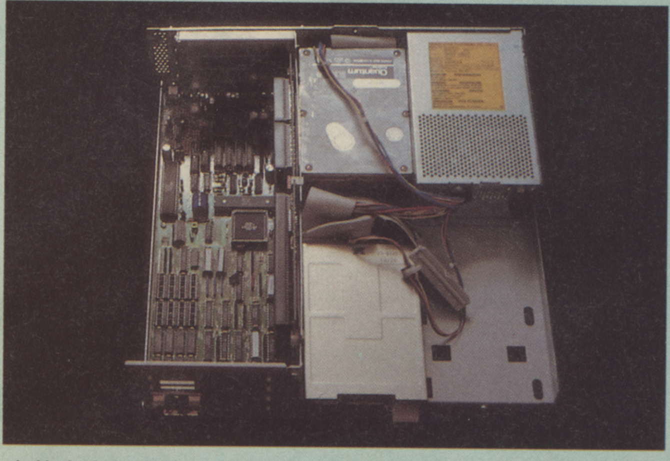
INSIDE THE AMIGA 3000

It's a busy scene under the bonnet of the 3000. Its trendy small footprint means that there's less space inside. Hard drive and controller, power supply, fan and floppy take almost two thirds of the space above the motherboard. The remaining third is an open cage for expansion cards.

As the new display has cured the problem that needed the flicker fixing card and the hard disk controller is mounted separately, this means that the four slots are free for any other use. The small space in the expansion card cage means that the cards must be mounted horizontally. PCs that have been manufactured this way have sometimes experienced slight heat problems with the lack of the 'chimney' effect. Expansion cards standing vertically are better able to lose their heat by convection than horizontal ones which trap the heat.

Of the four slots, one is Amiga dedicated, two are PC format for use with the PC Bridgeboard and one is dedicated to video and display handling.

Anyone who gets the same destructive pleasure that techno-journalists get from disemboweling everything electronic in sight will feel a great let-down from the Amiga 3000. Everything slides simply in and out and there's practically no skill at all needed to reduce the machine to a pile of components. This will be useful for those wishing to add internal upgrades and the third party add-ons that will surely follow this machine as quickly as alloy wheels follow a new sports coupé.



• Inside the Amiga 3000: everything fits together neatly.

monitors or a multi-sync monitor of the type that can display both 15 and 31kHz modes.

Display in the Amiga has always hitherto been handled by the dedicated display chip Denise, but in the 3000 Denise has whisked through puberty and blossomed into a regular little lady, offering better resolution and more elegant screen handling modes.

COMPATIBILITY

Programs for the 500 and 2000 that follow the rules and don't do silly things like tweaking the copper should run OK, but there may be some problems caused by the self modifying code used as protection in games software. As Commodore sees the machine as a serious workstation, it doesn't see this as a problem but who's to say that serious workstationeers don't like to play the occasional game?

There may be some instances where a program (probably a game) will be compatible with the internals of the 3000 and yet get tripped up by the first few bytes of protection on the disk.

MEMORY

The new machine comes with 2Mb of RAM on board and the new architecture means that it can now access 2Mb of chip RAM and up to 16 megabytes of fast RAM. Chip RAM is the memory that can be accessed by the 'blitter' and it has steadily grown in size from the 256K in prototype machines via 512K to one megabyte and now two.

All this may sound spacious but the bare machine comes with only two megabytes of memory split evenly between chip RAM and fast RAM. Extra RAM chips can be added as and when required

There's much chatter about using fast hard disk drives in the same way as memory. The current generation of drives are reducing access times to a few milliseconds, so this technique – known as 'virtual memory' – is possible.

Overall, workstation buyers will no doubt cast a second glance at the new Amiga 3000. ■

AREXX

ARexx gives CLI the clout to transforms the simple command line into a powerful utility. Although ARexx is a programming language, it reacts directly with the CLI to take it beyond batch routines to allow complete sequences of events to be set to run automatically. Rather than being a language of implementation, it is a language of manipulation; taking available commands and stringing them into a sequence that could attach to a network, file server, or on line service, check for mail/files etc, download the necessary and logoff again. In short it's a sort of auto pilot for the CLI.

LIMITATIONS

The dedicated graphics and sound chip set that has made the Amiga so powerful since its inception is limiting its speed now.

Back in the mid 80s, the 7.16MHz chip set speed was racy but even the current enhancements and improvements in the 3000 can't improve on the original speed – the dedicated chips still run at 7MHz.

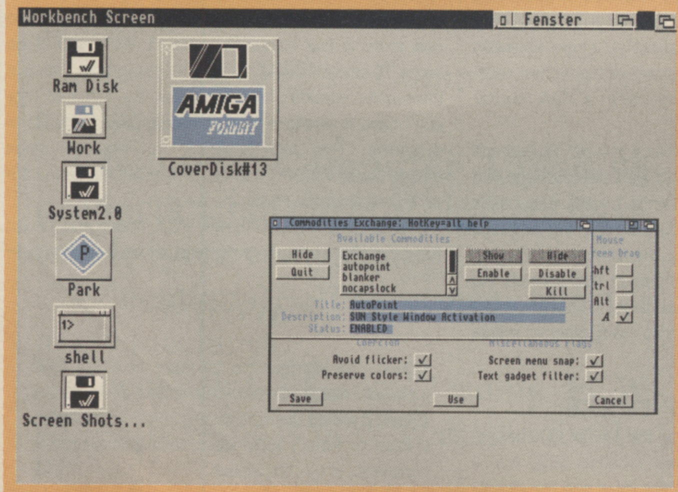
To get the dedicated chips into the 90s will need a complete re-write and re-modeling that will bring with it a new computer.

With the custom chips the 16MHz 68030-based machine performs only about 15 per cent faster than the ordinary 68000 Amigas, although with the math co-processor it can number crunch at a fair lick. The 25MHz machines will obviously outshine the cheaper one, but are still not that impressive.

The logical upgrade for Commodore would be to a machine based on the Motorola Reduced Instruction Set Computer (RISC) chip, the 88000, and this could mean an exciting new machine.

It has been suggested that the 68040 might be the next step, but why put a V12 in an old Cortina if you've got the technology and the money to design a new sports car?

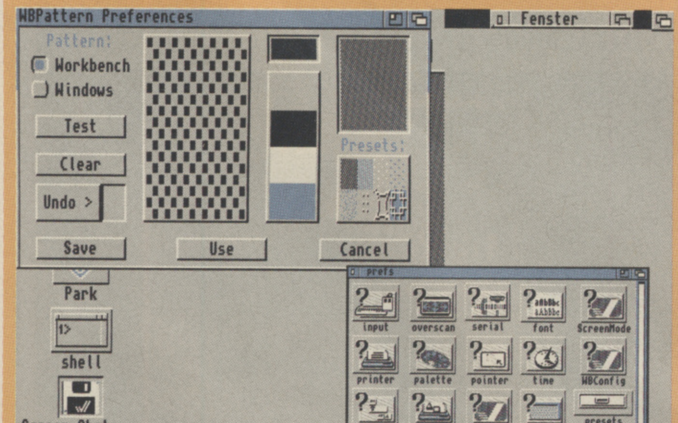
THE NEW WORKBENCH



Title: AutoPoint
Description: SUN Style Window Activation
Status: ENABLED

Avoid flicker: ☑
Preserve colors: ☑
Screen menu snap: ☑
Text gadget filter: ☑

• The new Workbench offers a more subtle colour combination that suits the quality and market that the A3000 is aimed at. Inset is a Workbench 2 display help screen.



Pattern:
● Workbench
○ Windows

• Preferences grows more features and a precise clarity. As well as preset colours there are icons for every occasion (inset). Fenster on the top bar is a window grabbing utility.

Blue, orange, white and black have (thankfully) been dragged to the dustbin icon and trashed. In their place is a gentler grey, blue, white and black. The effect is more soothing and to make life easier, there's a pull down bar of pre-set Workbench colours with several pastel combinations to choose from.

Colours can still be tweaked and sorted in the traditional way but we couldn't find a more pleasing combination than the presets. On a mono monitor (if anyone owning an Amiga 3000 is poor enough to only have mono) the preset Workbench colours merge into a blur so a contrast enhancing adjustment is needed to make the display readable. Workbench looked OK then on amber and green monitors but shone on a paper white display.

A disk of existing software was loaded into Workbench 2 and whoops... the new colours and the old icons look like something from Picasso on a bad day.

A simple enhancement in Workbench 2 is the ability to enter CLI commands and syntax in single lines or steps, instead of having to roll up sleeves and attack the command line with gusto.

Error messages are simpler to understand, giving some written clue to the problem instead of a faceless number that needed to be looked up in a table. File handling is improved as well. You no longer have to play the Russian doll game of opening several boxes to find a smaller one inside.

Workbench 2 allows simpler chasing around directories and access at any level of the directory chain.

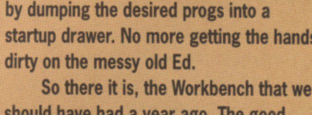
Someone with an Apple Macintosh has had a hand in the development of Workbench 2 and this shows in the Select All feature. A box is opened around the offending icons on an untidy Workbench and all the icons can be shifted and sorted together. Also from the Macintosh is the View by Name feature. This dumps icons in favour of the much simplified text equivalent.

One slight problem is the increased font control. Sure it's nice to replace the dreadful Topaz font with something like Helvetica or Times Roman but the different point sizes and spacing can leave you with menu bars that can't fit all of the text. It's a good idea to take size into account if using these facilities and remember that proportionally spaced text will spread differently.

Preferences looks nicer now and as well as a more useful and simpler to use screen. It combines some of the old routines which means a job such as installing a printer can be easier.

The startup sequence benefits from the changes as well. There's a simple drop-it-in-the-box routine that allows you to select what is implemented at start up by dumping the desired progs into a startup drawer. No more getting the hands dirty on the messy old Ed.

So there it is, the Workbench that we should have had a year ago. The good news is that it is claimed to run on lesser Amigas. The bad news is that some of the features rely on the enhanced ROM set of the 3000 so they won't be available. Still, it's a lovely environment on any machine.



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BETTER BY DESIGN

Competition among golf games on the PC is getting pretty tough, so Jack Nicklaus's new one needs to offer something unusual to be a hit. Stuart Anderton finds that a course designer is the extra something...

Welcome to Muirfield Village GC

Arguably Jack's greatest course, Muirfield is named after the Scottish course where Jack won his first British Open.

Press the space bar to continue.

• *Jack Nicklaus as the computer sees him and in real life, designing a new course. All the screen shots are EGA.*

The golf game seems to have taken over from the flight simulator as the office leisure software of the moment. Take a trip around a PC-based office and you'll find space bars being avidly tapped by on-screen golfers all over the building.

World Class Leader Board was the first, and for a long time the best, PC golf game but 1990 has seen a crop of new hopefuls enter the arena.

First up was *Greg Norman's Shark Attack.* Offering every option imaginable over the swing and addressing of the ball, this game was let down by some truly dreadful graphics in the PC version.

Then came *PGA Tour Golf.* The office PC was used for little else for weeks – *PGA Tour* is instantly playable but takes a long time to master, and its graphics are excellent. When you hit a drive the viewing angle changes to a from-the-flag view half way through, and each hole is preceeded by an animated helicopter fly-by. *PGA Tour* looked at golf though the eyes of an armchair Faldo watcher rather than an experienced player, and benefitted hugely from it.

Now joining the fray comes the hugely expensive (£40) *Jack Nicklaus Unlimited Golf.* Jack is not strictly a new player – his *18 Greatest Holes of Championship Golf* has been out for some time – but *Unlimited Golf* has been improved in so many ways that it deserves to be treated as a new game.

IN PLAY

There is nothing vastly innovative about the game play of *Unlimited Golf.* The ball is struck by tapping three times on the spacebar, the timing of the taps determining the power and accuracy. You can aim and choose different clubs using either the keyboard or a mouse.

The game has borrowed some of *PGA Tour*'s best features; the action replay for instance, and you can choose to view the shot from the pin. The slope of green is shown with a contour map which is superimposed on the playing surface. This is better than *PGA Tour*'s separate screen, and the angled way the player stands to the hole makes putting difficult and challenging. There is no such thing as a simple putt, and that means that you have to keep up the concentration throughout.

Weather conditions are variable, and this changes factors such as the speed of the greens. Two courses are provided; Muirfield and a imaginary course.

Overall there is nothing very new about the game itself, but it plays solidly and you feel that if you hit a bad shot it was your mistake rather than the program's – which can't be said of all its rivals. There is, however, one thing which sets *Unlimited Golf* apart and gives it its name – the fact that you can design your own courses.

COURSE DESIGNER

The course design program which comes with *Unlimited Golf* is superb. It offers complete and total control over the course; you can alter hills and valleys of the course (*Unlimited Golf* features sloping fairways), add water and trees and even paint your own backdrop. Every aspect of the courses which are provided can be altered, so you can create a perfect customised course.

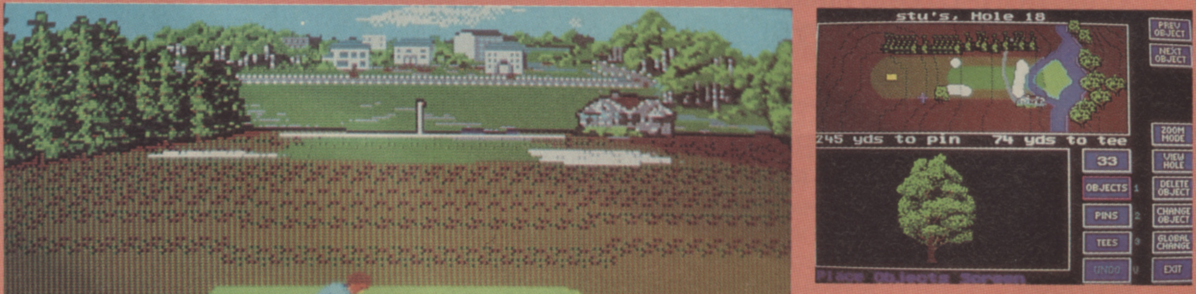
In use it is rather like a paint package, and, although it can be controlled from the keyboard, a mouse is essential to maintain your sanity. After the initial fun of making a totally impossible course (a 310-yard par three over a lake anyone?) you soon settle down into trying to hit the right level of difficulty.

It takes a lot of time and effort to produce a decent course; you have to play the course while taking notes and then go back and edit it to do it properly. To help you along the manual gives a lot of hints, and Jack himself pops up from time to time with advice.

The course designer makes *Unlimited Golf* the most interesting golf game, although the gameplay itself falls a fraction short of *PGA Tour.* In tandem with the ability to make your own courses, Jack Nicklaus is on to a winner. ■

Jack Nicklaus Unlimited Golf and Course Design *costs £39.99. It is available for the PC only and is published by Accolade.*

AND IF YOU THINK YOU CAN DO BETTER...



Stuart Hole: 18
Stroke: 1 Par: 4
Distance: 306 yds.
Total: Even par

stu's, Hole 18

245 yds to pin 74 yds to tee

Place Objects Screen

• **Far left: You won't find this hole in your local course, it's one designed from scratch with Ultimate Golf. Top left: Designing the hole used a paint package-like program with dozens of options to control the course. Bottom left: During the design process you can walk the hole to see how it is shaping up.**

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EXPRESS MAiL

Write and tell us what you think about anything under the Sun! Reach us at: *Express Mail, 30 Monmouth Street, Bath BA1 2BW.* Sorry, no personal replies, even with an SAE, as we're too busy writing the magazine. Replies this week by Keith Pomfret.

Happy ending

Sometime in the summer of 1989 I inherited from my grandchildren a Spectrum, without an instruction book. It gave me a great interest and I got help from a pal who has an Amstrad. I got the bug, enough to make me want to press ahead.

On advice from another friend I got myself an Amiga. It had a fault, so I returned it and waited a month for a replacement. When it did arrive, I realised that I was in deep trouble. At this point, I should maybe explain that I had had a bang on the head, resulting in brain damage and impaired vision. So here I was with a machine I couldn't handle, with instruction books written in Americanese. Then Presto! I had been buying your mag occasionally and, miracle of miracles, I was on my way. There on page 43 of October 28 edition, was a bloke offering help. So nothing daunted I sent a letter to this Good Samaritan, and have had great success since.

I have now bought a 512K expansion board and a word processor from Evesham Micros, had lots of help from Gordon Keenan, who runs the Amiga Helpline at 61 Glenfinnan Road, Glasgow G20 8JG, and, of course, *New Computer Express.*

Without the above combination I guess I'd still be in the doldrums. So to you all I'd like to say a big thank you.

D Sorbie, St Monans, Fife.

Which goes to show that not only does *Express* offer a service, it also attracts a better class of reader.

Electronic asylum

After reading your fine, grovel grovel, magazine twice, I still couldn't find this week's word in the competition, but that's not the point of this letter. I, being very interested in free software and a miserly old so-and-so as my friends tell me, read the comp's coupon and glanced upon the various disk and cassette sizes.

The usual cropped up. 3-inch for those users with inadequate computers (ahem, its not the size but the... hmm, fails on both counts), 3.5-inch for those larger 16-bit owners who can take the more mature smutty innuendoes that I come up with and last, but definitely not least, the 5.35-inch disk. New format huh? Or a Freudian slip of the tongue? What about that extra-large disk for extra-large machine owners, the 8-inch (and if they aren't Freudian I don't know what is!) I remember them with their washing machine sized drives.

Laurence Sheed

The more smutty bits on the end of this letter were lopped off in the name of good taste, as was the plug on the end as it was wired wrongly. Keep on taking the Largactyl and reading *Express* and it'll get better.

Fog on the Tyne...

I must tell you how I feel on the following subjects:

• 8-bit computers.

In my opinion, as long as there are enough people around who are interested in them, the computer manufacturers keep on making and selling them, then the 8 bits will be with us, and so will their software and plenty of it.

• Space.

On the subject of the C64 versus CPC, both computers should be given equal space in *Express*, OK?

• PD

Please put the PD column on a proper page inside *Express.*

• Pirates.

Catch 22 situation I feel. Pirates rip off software from software houses, software houses charge over the top prices for their software to combat losses from being ripped off by pirates.

16-bit software costs too much. I believe that CD-ROM just might be the answer, although how much will the software houses charge us for CD disks? £20? £30? £40? They will want to fill their pockets with the consumer's money, no doubt about that.

When the 32-bit machines start to fill our homes, that is if we can afford them, how much will software be then? A lot more than we can ever afford.

A complaint about the hackers who advertise their services

I am writing to complain about a classified advertisement which I saw in *Express* The ad was as follows:

DOES anybody know of any hacking groups I could get in touch with? (on-line hacking) If so, write to A. Person, 22 High St, Anytown, Midshire (changed for obvious reasons)

I feel it is totally irresponsible of *Express* to advertise for illegal groups. It is obvious, even to the unfamiliar, that this person wishes to illegally gain access to a system over a telecommunications line.

Straightforward un-authorised access to a computer system can lead to a significant fine and/or up to six months imprisonment and seizure of the offender's equipment.

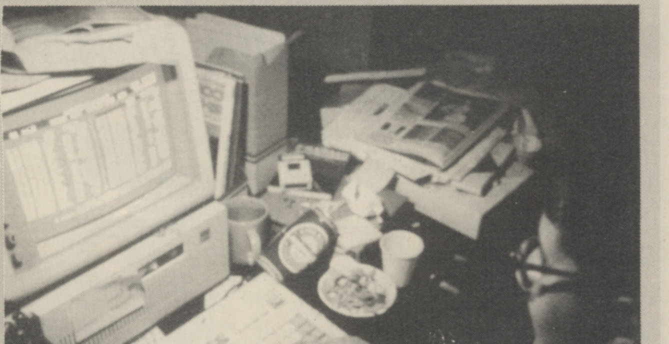
The next question should be why this person wants to gain access. If it is for the removal of data then the imprisonment increases to up to 12 or 24 months (I'm unsure, which). If the person is hacking the system to corrupt data then the imprisonment can be up to five years.

May I recommend that you do not publish any similar adverts in the future, as you may be regarded as encouraging such events.

Also, I feel that it would be in everybody's interest if you published some form of article discouraging hacking. In addition, with BT's new System X digital networks a hacker could be traced, on-line within 30 seconds, or 30 minutes if he hangs up. This means that 'fun' hackers could encounter severe punishment

M Summers, Great Barr, Birmingham

Express is revitalising the reader ads and in two shakes of an armadillo's tail we'll be weeding out the wicked and sending Reggie and the Boys round to tell them off. This means that there will be more room for the thousands of bona-fide reader ads that have hitherto been missed.



• Sitting on the other end of an advert: but we've got the hackers' number.

• Viruses
I'm sorry but these people are even lower than pirates, the people who write these disgusting little programs should be made to eat a packet of Woodbines before having their buttocks flayed!

• Tyne and Wear
If Tyne and Wear is another planet, then Bath must be a tin thing that people get washed in, and Avon is something my mother buys to tart herself up with.

• My computer *vs.* your computer
No real argument. It's all down to one's own personal taste when buying a home computer. The tech spec of any machine is just a formality, so what if one machine can make tea, print money and play football for England? Buy what you like and can afford, after all it's a free country.

• New Computer Express
The best home micro magazine for under a pound, and over a pound for that matter.

Well that's it, I feel a bit better now for writing all that so I think I'll sign off.

A suppressed intellectual from the beloved County of Tyne and Wear.

And may suppression reign supreme in the top right-hand corner of England's green and pleasant bits.

■ Book of the decade

Sometime ago in your magazine there was an article about communications in which a very useful book called *The Hacker's Handbook* was mentioned.

As I have had great difficulties in finding this book in the shops, and am very interested in its subject matter, I would be obliged if you could tell me if it might be possible to get a copy by mail order.

R Murdoch, Langside, Glasgow.

A 200 yard stroll to WH Smith in Bath found a copy sitting on the shelves waiting to be bought. A phone call to Menzies confirmed that it too sells it.

This interesting tome has been revised (and diluted) several times since the original edition and, although it still makes a good read, try scouring second hand bookshops for a copy of one of the earlier editions which were much more juicy. We don't know of anyone currently selling it by mail order.

Hurry up though if you want a copy – the Computer Misuse Act recently in force could mean that books like *The Hacker's Handbook* are withdrawn lest they should incite the illegal.

■ Call the loony bin

At last I can say that my computer's better than yours. I have an Oric Atmos and it has 116 bits, I know because I counted them.

Now does anyone known how to put the bloody thing back together again?

P J Wally, Bow, London

This is really a letter for Tech Tips but in short, here's what you need to do:

• Rub each of the parts with a smigin of elbow grease.

• Drink a quart of midnight oil.

• Get an adult to cut the remains up using the safe rounded scissors.

• Place the bits in a squeezy bottle and cover with sticky-backed plastic.

Now you're the first person with a portable cylindrical Oric and you can be the wonder of the CES show.

■ Still angry

I know you have probably had thousands of letters about Mr H Kennet *(We certainly have – Ed)*, but I have just got to write.

I have had a Spectrum for six years, and I have just recently got another 8-bit (a SAM Coupé).

I'm not saying that 16-bits 'suck', I know quite a few 16-bit users, but when I mention my 8-bit they don't start boasting and saying 8-bits have had their day, as Mr Kennet puts it.

What do you say to the SAM Coupé Mr Kennet? Are you going to start slagging this new computer off just because MGT has gone into receivership?

You are wrong about this computer, it has graphics that are just as good, and sound that is better than the ST. You may think I'm boasting, I'm not, I'm giving defence to the SAM and other 8-bit users. Just remember, Mr Kennet, that if it weren't for 8-bits, there wouldn't be any 16-bits.

Anon, Carlisle, Cumbria

■ Editorial blinkers

It is interesting to read in the same issue of *Express* Mr R M Berry (End Game) writing about not having these 'my computer is better than yours' arguments, and Keith (heavy fettle) Pomfret agreeing with him, and then I turn the Comment column. What term would I use? Blinkered!

The writer says that there aren't any cases of ST software being better than the Amiga's. I'm not saying the ST is better than the Amiga, but each has it's specialist field. I haven't heard many Amiga owners who haven't commented that the ST's serious software is in many cases much more usable. The owner of a local Amiga PD service said exactly that. GFA BASIC 3 was eagerly awaited on the Amiga, but it just can't match the ST version.

So why let this Comment column go to print? It isn't that the ST scene is slowing down, it's just that companies can't afford to produce rubbish anymore. A 'rough head count' of incoming software isn't the point. How good is the software you're counting? Last year has seen the introduction of *Script, Harlekin, Protext* and the excellent *Calamus.* While the ST is big in Germany it certainly won't run out of excellent software.

D Oakley, Bignall End, Stoke on Trent

The author of Comment replies: I did not say that there are no cases of ST software being better than Amiga software; I *did* say that the old days of the ST outclassing the Amiga on the serious software side have gone.

This is undoubtably the case – there is now plenty of excellent Amiga software for word processing, DTP, music, you name it. The point I was making was that there is no need to make an Amiga emulate an ST.

As for the German software, it's true that a lot of good stuff is coming from that country, but as an ST owner myself I feel less than confident knowing that most decent software is coming from abroad, where a tiny change in exchange rates could make translating the program into English unviable. It's not healthy to rely on imports this much.

Also, I'm afraid two of the four programs you mention as being released in the last year are in fact older than that.

I would, of course, love to be proved wrong and I'm looking forward to the flood of top-notch ST software which is at this moment being piled into sacks at Bath Sorting Office. ■

■ Smacked wrists over an Amiga board

In your edition of 18 August 1990, under the 'Your format – Amiga' section, Jason Holborn reported on the ATonce PC emulator board under the heading 'AT Power for 200'.

His report is riddled with misinformation and errors and as such could be misleading to the readers of your publication.

Firstly, he states that the ATonce board is sub-£200. As at this date the board is not available and even if it comes on to the market with the scheduled date of October I guess that it will be at the same price as the ST version i.e. £199. This is indeed sub-£200 – just.

Assuming this to be the case, Bitcon's Power PC board is not £200 more expensive – it is £324 , making it £125 more expensive. Nowhere near the £200 so blatantly claimed.

He later reasserts his claim that Bitcon's board is £400.

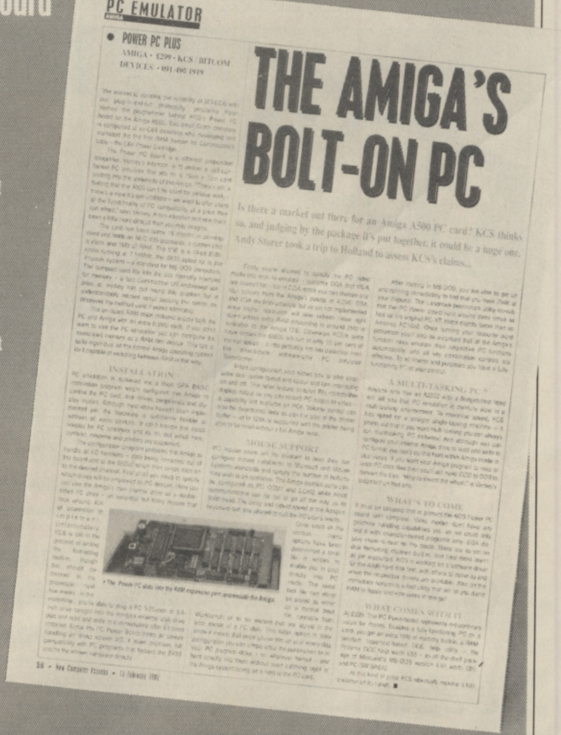
He then states that the ATonce board is still under development, so how can he make factual statements as to its capabilities? He should have said something like "..it is claimed that the board will be capable of....".

Has he personally fully tested both boards in their finished form? No he has not!

Has he read the press regarding Windows 3, which it seems is a major advance for the Amiga to be running. The general opinion in the PC press is that Windows 3 is not that good.

What is the advantage of multi-tasking Amiga and PC software? Maybe he would like to explain, as mostly the two are totally incompatible and I for one can see no earthly reason for so doing, except as a demo of the machines capability. Not a lot of use!

Finally, if the ATonce is going to be available for October at the assumed price, should he not point out that fitting it requires considerably more skill and invalidated the warranty, unlike the Bitcon board that can be fitted in minutes without loss of warranty and performs totally adequately in PC mode. (I have been using one for over a month now with absolutely no problems).



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THE AMIGA'S BOLT-ON PC

Is there a market out there for an Amiga A500 PC card? KCS thinks so, and judging by the package it's put together, it could be a huge one. Andy Storer took a trip to Holland to assess KCS's claims...

• Our original preview of the Bitcon board back in February. At least we give both sides of the argument.

I am not connected with Bitcon in any way.

N Bristow, Swindon

From the screams coming from the basement, I think that Jason is learning his lesson. We've banished him to the ZX81 graphics and animation laboratory for a week and he won't be allowed back near an Amiga until he's mastered ray tracing on the ZX81.

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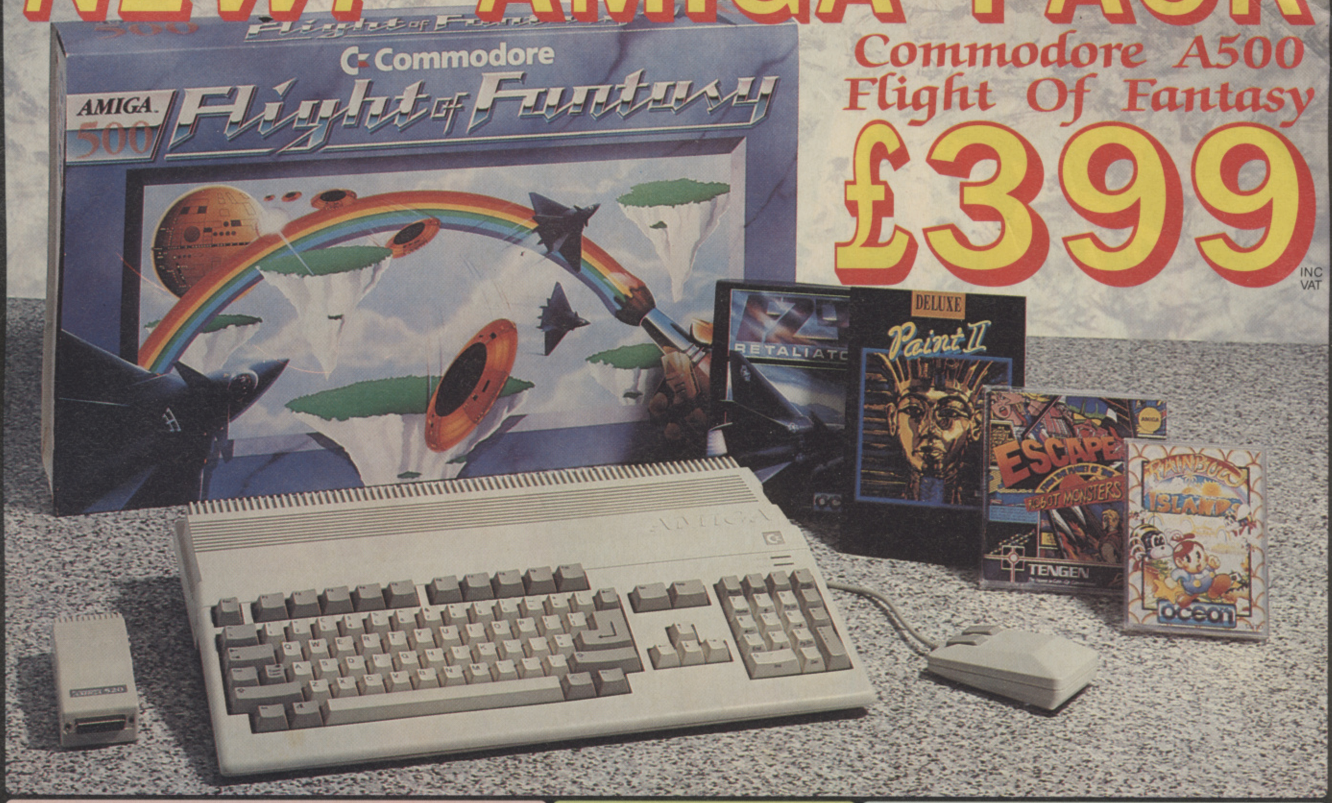

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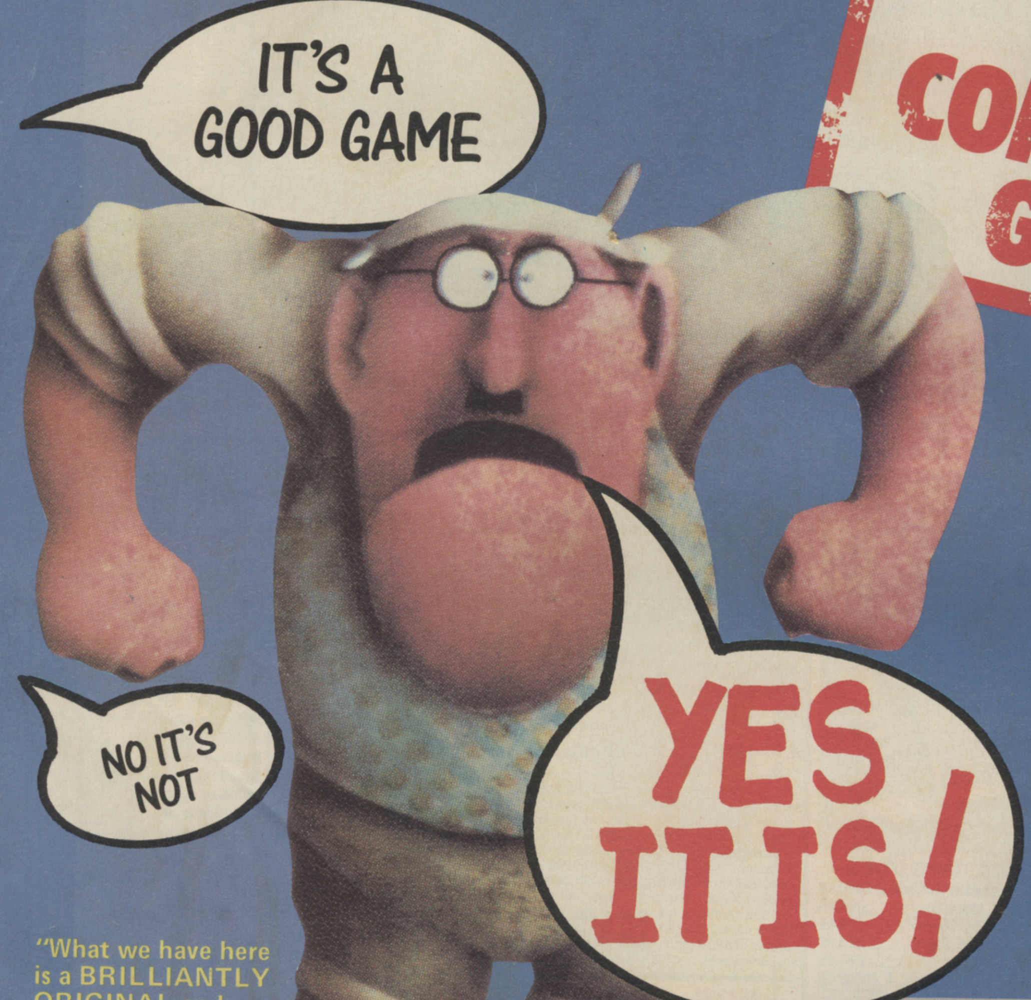

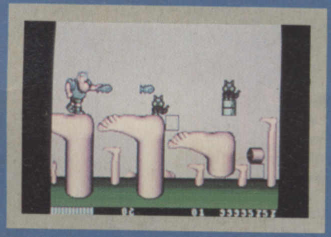
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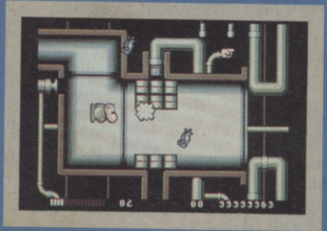
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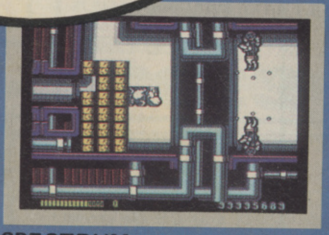
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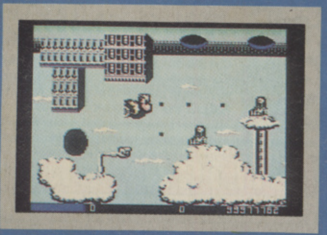
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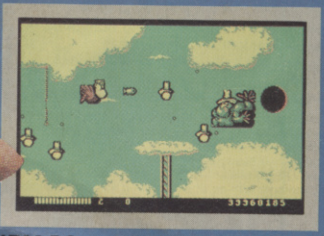
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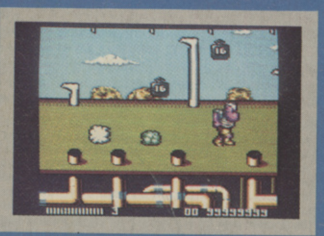
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